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## Ordinance on the safety of workers when working in pressurised environments.

dated 15 April 2015 (Stand am 1. Januar 2022)

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*The Swiss Federal Council,*

based on Article 83 paragraph 1 of the Federal Law of 20 March 1981<sup>1</sup> on Accident Insurance (UVG),

*decrees:*

### Chapter 1: General Provisions

#### Art. 1 Subject matter and scope of application

1 This ordinance specifies the measures that must be taken to ensure the safety of workers when working in pressurised environments.

2 Working in pressurised environments is defined as:

- a. Construction work in compressed air that takes place in a closed environment and does not require immersion;
- b. Diving work when the diver, equipped with diving equipment, is under the surface of the water.

3 In addition to this ordinance, the Ordinance of 19 December 1983<sup>2</sup> on Accident Prevention (VUV) and the Construction Work Ordinance of 18 June 2021 apply in particular<sup>3,4</sup>

#### Art. 2 Definitions

The following apply for the purpose of this ordinance:

- a. *Compressed air*: Breathing air or breathing gas with a working pressure of more than 0.1 bar.
- b. *Breathing air*: Air from the atmosphere or a technically produced gas mixture whose composition corresponds to atmospheric air;

AS 2015 1187

<sup>1</sup> SR 832.20

<sup>2</sup> SR 832.30

<sup>3</sup> SR 832.311.141

<sup>4</sup> Version pursuant to Art. 122 para. 2 of the Construction Work Ordinance dated 18 June 2021, in force since 1 January 2022 (AS 2021 384).

- c. *Breathing gas*: Gas mixture that is more suitable than atmospheric air for medical reasons;
- d. *Working pressure*: excess pressure above atmospheric pressure at the workplace, in the medical chamber or in the personnel airlock, expressed in bar;
- e. *Work chamber*: Room in which construction work is carried out in compressed air;
- f. *Airlock*: Room in which persons or material are located during the time of pressure increase up to the working pressure or during the times of pressure reduction down to atmospheric pressure;
- g. *Medical chamber*: Room in which persons can be medically treated by changing the working pressure;
- h. *Decompression*: Process for a controlled desaturation of the body from nitrogen, starting from the existing saturation at working pressure to a harmless to health residual saturation at atmospheric pressure;
- i.  *Holding level*: Interruption of decompression in the event of a pressure justified by occupational medicine.

**Art. 3** Recognised regulations for safe working in pressurised environments

1 During the entire duration of the work in pressurised environments, the regulations recognised by the state-of-the-art must be observed.

2 In particular, the guidelines published by the Swiss Accident Insurance Fund (Suva) based on Article 50 paragraph 3 VUV<sup>5</sup> on threshold values for physical effects, namely decompression tables, are recognised as state-of-the-art rules for safe working in pressurised environments. If decompression tables other than those of Suva are to be used, these must be agreed upon with Suva before work commences.

## Chapter 2: Provisions for all work in pressurised environments

### Section 1: Reporting obligation

**Art. 4** Notification of work in pressurised environments

1 Employers are obliged to report the following work to Suva:

- a. all construction work in compressed air at least four weeks before it is carried out;
- b. all diving work requiring decompression of more than 15 minutes due to the planned exposure times, at least one week before work is carried out.

2 Operations that cannot be planned for construction work in compressed air and diving work must be reported to Suva as soon as possible, but no later than two weeks after the operation.

<sup>5</sup> SR 832.30

**Art. 5** Notification of illnesses, accidents and serious incidents

In addition to the ordinary accident report in accordance with Article 45 paragraph 1 UVG, Suva must be notified within 24 hours.

- a. Illnesses caused by working in a pressurised environment;
- b. Accidents during work in pressurised environments in which at least one person was seriously injured;
- c. serious incidents during work in pressurised environments, if these incidents could have resulted in seriously injured persons or death.

**Section 2: Planning and work preparation**

**Art. 6** Planning and work preparation of work in pressurised environments

1 Work in pressurised environments must be planned and prepared in such a way that the risk of accidents or damage to health is minimised and the necessary safety measures can be observed, particularly with regard to the use of substances, products and work equipment and the application of work procedures.

2 For this purpose, the employer shall ensure that a written health and safety concept containing the measures required under this Ordinance is in place before the start of work in pressurised environments.

3 He shall ensure that suitable materials, installations and equipment are available in sufficient quantities and in good time when working in pressurised environments, in particular:

- a. any necessary airlocks and medical chambers;
- b. First aid and rescue equipment.

4 The materials, installations and equipment must be in a safe operating condition and meet the requirements of occupational safety.

5 All employees must be instructed on emergency behaviour before starting work.

**Art. 7** Emergency and rescue plan

1 The employer must ensure that an emergency and rescue plan tailored to working in pressurised environments is drawn up. This must be kept available in a suitable form and at a suitable location.

2 Access for rescue services must be guaranteed.

3 The effectiveness of the emergency and rescue plan must be demonstrated by regularly repeated drills.

**Art. 8** Use of substances, products and work equipment

- 1 The employer must ensure that only substances, products and work equipment that are suitable for such use are used when working in pressurised environments.
- 2 The work equipment must be installed and operated in such a way that the safety on employees working in pressurised environments is not directly endangered if a safety-relevant element fails.

**Art. 9** Explosion and fire protection

Suitable measures must be taken to prevent explosions and fires when working in pressurised environments and to avoid any consequences for the safety of employees in the event of an explosion or fire.

**Art. 10** Consideration of climatic conditions

If climatic conditions such as particular heat, cold and humidity are likely to jeopardise the health of employees, suitable measures must be taken.

**Section 3: Management and execution of work****Art. 11** Responsible person

- 1 The employer appoints a person to lead the work in the pressurised environment (responsible person), He/she appoints a deputy.
- 2 He/she delegates to the responsible person the management and decision-making competences required by the health and safety concept.
- 3 The responsible person and his/her deputy must have successfully completed a training programme tailored to their role. The training must be documented in writing.

**Art. 12** Duties of the qualified persons

- 1 Depending on the type of work and in accordance with the specifications of the health and safety concept, the responsible person determines the qualified persons for the following duties:
  - a. Supervision of employees working in pressurised environments;
  - b. Operational safety of electrical installations;
  - c. Operational safety of compressed air installations;
  - d. First aid;
  - e. Firefighting;
  - f. Operation of the medical chamber
- 2 The following persons shall be appointed for the task referred to in paragraph 1 letter a:

- a. for construction work in compressed air; the lock keepers;
  - b. for diving work: the signallers
- 3 The responsible person determines:
- a. what rights and obligations the qualified persons have;
  - b. where the qualified persons must be located so that they can fulfil their tasks in good time in the event of an incident;
  - c. how the tasks are distributed among the qualified persons so that they can fulfil their tasks in good time in the event of an incident;
- 4 The qualified persons must have successfully completed an in-house or external training programme tailored to their task. The training must be documented in writing.
- 5 The tasks of qualified persons can also be assumed by the responsible person.<sup>6</sup>

**Art. 13** Position of the responsible person and the qualified persons in relation to the company

- 1 The employer must create the conditions to ensure that the responsible person and the qualified persons can fulfil their duties.
- 2 The responsible person and the qualified persons must be granted the necessary independence to fulfil their tasks. They must not suffer any disadvantages from the fulfilment of their task..
- 3 The responsible person and the qualified persons must inform the employer of their activities.

**Art. 14** Position of the responsible person vis-à-vis Suva

- 1 On request, the responsible person must provide Suva with information about his/her activities and submit his/her documents for inspection. Suva shall inform the employer.
- 2 Suva advises and supports the responsible person.
- 3 The responsible person must inform Suva without delay if there is an immediate and serious risk to the life and health of the employees and if the employer refuses to take the necessary measures.

**Art. 15** Requirements for the execution of the work

As long as employees work in pressurised environments, the following requirements must be met:

- a. The responsible person and the qualified persons must be present on the construction site or the diving site and may not be deployed for other tasks that could prevent them from fulfilling their duties.

<sup>6</sup> Inserted by No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS 2016 3239).

- b. The occupational physicians must be reachable at all times via the telephone network.

**Art. 15a<sup>7</sup>** Special provisions for diving operations by police and rescue divers  
During forensic rescue, search and recovery diving operations, in particular dynamic diving operations by police and rescue divers, during the associated training, during further training courses and during training dives by police and rescue divers, a head of operations assumes responsibility on site. Unless otherwise specified, the head of operations is deemed to be the responsible and qualified person for the preparation and execution of such diving operations. He/she can also be part of the diving team.

## Section 4: Personal requirements and training

### Art. 16 Personal requirements

- 1 Work in pressurised environments may only be carried out by persons who:
  - a. have reached the age of 18;
  - b. are able to perform the tasks assigned to them reliably and safely due to their physical and mental condition;
  - c. are able to communicate at the workplace and can use the available means of communication;
  - d. are trained to work in pressurised environments.
- 2 To prove fulfilment of the requirement under paragraph 1 letter b, an entry examination under Article 72 VUV<sup>8</sup> and the control examinations under Article 73 VUV are required.
- 3 If a person has health concerns, the examining occupational physician will determine the conditions under which this person may carry out certain work in a pressurised environment. The final assessment of suitability or conditional suitability is the responsibility of Suva in accordance with Article 78 VUV.
- 4 Employees must inform the responsible person of any changes in their state of health that could pose a risk to them while working in pressurised environments. In the event of medical incidents such as accidents, operations and serious illnesses, the occupational physician must be informed and consulted if necessary.
- 5 Persons over 50 years of age may only work in pressurised environments for 50 percent of the normally permitted working time. They may only carry out supervisory work or physically light work. Suva may authorise exceptions in justified individual cases.
- 6 Pregnant women are not allowed to work in pressurised environments.

<sup>7</sup> Inserted by No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS 2016 3239).

<sup>8</sup> SR 832.30

**Art. 17** Training

- 1 The employer must ensure that employees are trained to work in pressurised environments. He must document their training in writing.
- 2 The training must be geared towards working in pressurised environments and must cover at least the following topics:
  - a. Influence of working in pressurised environments on the human body and their consequences for health;
  - b. particular hazards of the intended work and adequate handling of the hazards;
  - c. legal principles in the area of occupational health and safety.

**Art. 18** Learning phase

- 1 The employer shall ensure that the working conditions for employees in the learning phase are adapted in an appropriate manner.
- 2 In particular, he ensures that:
  - a. a test airlock or a test dive is carried out under the supervision of the responsible person or the responsible occupational physician before starting work in pressurised environments;
  - b. the first five work assignments in pressurised environments are accompanied by an experienced person; and
  - c. during the first three work assignments, the stay in the pressurised environment is only 50 percent of the normally permissible stay time and only light work is carried out.

**Art. 19** Further training

- 1 The employer shall ensure that all employees receive regular further training. He must document their further training in writing.
- 2 Any changes to working methods, the environment or installations at the workplace must be taken into account during further training.

**Section 5: Medical care and medical chamber**

**Art. 20** Medical care

- 1 From the start of the work in a pressurised environment, the employer must be able to prove that he has agreed in writing with an occupational physician that employees will receive medical care.
- 2 The occupational physician may call in other physicians to fulfil his or her duties.
- 3 In consultation with the occupational physician, the employer must provide a protected area for medical care at the place of work.

**Art. 21** Medical chamber

- 1 A medical chamber must be available on site and ready for operation in the following situations:
  - a. for construction work in compressed air; if the working pressure is greater than or equal to 0.7 bar;
  - b. for diving work: if decompression of more than 15 minutes is required due to the planned exposure times.
- 2 The medical chamber must be suitable for the medical care of people who fall ill or have an accident while working in pressurised environments.
- 3 The number and capacity of the medical chambers must be adapted to the number of persons expected at the workplace.
- 4 the location of the medical chamber must be selected so that it can be reached quickly from the workplace in the pressurised environment.

**Art. 22** Operation of the medical chamber

- 1 The medical chamber must be checked for proper functioning in accordance with the manufacturer's specifications before each commissioning at the place of use and after each use.
- 2 Before each treatment, the medical chamber must be supplied with energy, breathing air and oxygen in such a way that it can be operated independently of the environment for 150 percent of the expected treatment duration.
- 3 The qualified person responsible for operating the medical chamber must be able to prepare and operate the medical chamber in accordance with the instructions of the occupational physician. He/she must be present during the treatment.
- 4 The occupational physician must be available within a reasonable period of time.

**Art. 22a<sup>9</sup>** Ensuring first-aid medical care during diving operations by police and rescue divers

Initial medical care during diving operations by police and rescue divers must be provided either by an on-site medical chamber in accordance with Article 21 or by an equivalent rescue concept, namely by means of normobaric oxygen therapy on site and transport to a medical centre specialising in hyperbaric diseases.

<sup>9</sup> Inserted by No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS 2016 3239).

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## Section 6: Documentation

### Art. 23 Documentation of work assignments

1 The employer shall ensure that documentation of work assignments is kept for each employee. The documentation must contain the following information for each work assignment involving pressurised environments.

- a. Name and function of the employee;
- b. name of the responsible person;
- c. name of the qualified person responsible for supervising employees working in pressurised environments;
- d. Date and location of the work;
- e. Altitude of the place of work in metres above sea level;
- f. maximum working pressure or maximum immersion depth;
- g. duration of work in the pressurised environment;
- h. decompression times and associated holding levels;
- i. decompression rules used;
- j. particular incidents related to health.

2 The following have access to the documentation:

- a. the employee with regard to all information that concerns him or her personally;
- b. the occupational physician;
- c. the implementing bodies of the Labour Act of 13 March 1964<sup>10</sup>;
- d. Suva.

3 The employer must keep the documentation for at least 10 years.

### Art. 24 Health record

1 The employer shall arrange for the occupational physician to keep a health record for each employee.

2 At least the following data must be entered in the health record:

- a. the results of the medical examinations in accordance with Articles 72–74 VUV<sup>11</sup>;
- b. the results of medical examinations in the event of accidents and incidents and in the event of reasonable suspicion of an occupational disease acquired during the occupational activity.

<sup>10</sup> SR 822.11

<sup>11</sup> SR 832.30

- c. the medical events reported in accordance with Article 16 paragraph 4.
- 3 The occupational physician has the right to inspect the occupational health care data relevant to the fulfilment of his or her tasks and available at Suva.
- 4 The employee must report medical events such as accidents, operations and serious illnesses to the occupational physician at the latest before the next assignment in pressurised environments.
- 5 The occupational physician must inform the employee appropriately about the results of the medical examinations in connection with his or her work.
- 6 The employee has access to the health record and all documents relating to occupational health measures concerning him or her.
- 7 The employer shall ensure that the occupational physician hands over the health record to Suva no later than one year after completion of the work. Suva must keep the health record for 40 years.

**Art. 25** Personal document

- 1 In the case of construction work in compressed air and diving work where decompression of more than 15 minutes is required due to the planned exposure times, the employee must carry a personal document with him/her outside the place of work for seven days after the last exposure to pressurised environments.
- 2 The document must state that the employee has carried out work in pressurised environments and how the rescue services and the occupational physician can be contacted in the case of an emergency.

## **Chapter 4: Particular provisions for diving work**

### **Section 1: General remarks**

**Art. 44** Local employment conditions with increased risks

- 1 Before the start of diving work or diving operations, the employer or the head of operations for police and rescue divers must obtain information on the following points regarding local working conditions, which may involve increased risks:<sup>12</sup>
- Water quality, in particular pollution and radioactive contamination of the water;
  - Water temperature;
  - Currents, especially those that can change suddenly during the dive;
  - Devices obstructing the diving work, such as floating equipment, trusses or bridge piers, cables, sewers, trenches, funnels and niches;

<sup>12</sup> Version according to No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS 2016 3239).

- e. confined spaces such as pipework, sewers, wrecks and tanks;
  - f. geologically unstable conditions such as undercutting and steep slopes with landslide-prone deposits;
  - g. Presence of shipping and waterways.
- 2 The employer or head of operations of the police and rescue divers shall determine which qualified persons are to be deployed to carry out the work. He or she must take the appropriate safety measures.<sup>13</sup>
- 3 Divers must be informed in an appropriate manner about the local working conditions with increased risks and the safety measures taken.

**Art. 45** Working on and near bodies of water

- 1 If there is a risk of drowning when working near or on bodies of water, suitable protective and rescue equipment such as life jackets or collars, rescue rings, ropes, throwing lines and hooks must be available. These must be able to be used as intended at all times.<sup>14</sup>
- 2 In addition, one or more motorised lifeboats must be available. These must be able to be used independently of the ongoing diving work. No motorised lifeboats need to be available if the rescue is guaranteed from a location on the surface, namely from the shore, pontoons, fins, platforms, jetties, from the air with helicopters, or by a diving team or a diver in the water.<sup>15</sup>
- 3 Suitable measures must be taken to protect divers from injuries caused by lifeboat propulsion systems such as propellers.
- 4 Measures must be taken to prevent a fall into the water.
- 5 Each diving site must be signposted in accordance with Article 32 of the Inland Navigation Ordinance of 08 November 1978.<sup>16</sup> On bodies of water with shipping traffic, the employer shall liaise with the responsible authorities and the shipping companies concerned.

**Art. 46** Access to water

Access to water must be arranged in such a way that:

- a. safe and ergonomic entry and exit is guaranteed;
- b. the diver can be rescued from the water in an emergency.

<sup>13</sup> Version according to No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS **2016** 3239).

<sup>14</sup> Version according to No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS **2016** 3239).

<sup>15</sup> Version according to No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS **2016** 3239).

<sup>16</sup> SR **747.201.1**

**Art. 47** Supply of breathing air, breathing gas or oxygen

- 1 Divers must have a reliable supply of breathing air or breathing gas while they are in the water.<sup>17</sup>
- 2 The primary supply system must be able to ensure that divers can breathe even if they are unconscious.
- 3 If the primary system fails, a secondary supply system must be available immediately to enable a safe ascent to the surface.
- 4 Breathing gases may only be used if their composition and the planned area of application comply with the recognised rules for safe working in pressurised environments in accordance with Article 3.
- 5 If decompression with oxygen is required, the diving equipment must be suitable for decompression with oxygen and an adequate supply of oxygen must be available at the dive site.
- 6 The full face mask may be dispensed with during forensic, rescue, search and recovery diving operations, in particular dynamic diving operations, by police and rescue divers, during the associated basic diving training, during further training dives by police and rescue divers, if this is necessary, in particular due to the current conditions, the underwater topography, due to obstacles in the water and for the penetration of salvage objects. In these cases, the international standards of the recognised diving training organisations must be observed.<sup>18</sup>
- 7 As part of their professional training activities, diving instructors can dive with a full face mask. The international standards of the recognised diving training organisations must be observed.<sup>19</sup>

**Art. 48** Preparation of divers

- 1 In consultation with the divers, the responsible person must specify the diving depths, the duration of the dives, the composition of the breathing air, the decompression levels and their holding levels as well as any oxygen decompression in writing before the dive. He/she monitors compliance with these requirements.
- 2 Immediately before entering the water, the diver and the responsible person must check that the equipment is in good working order.
- 3 The diver must enter the water in such a way that he/she does not endanger him/herself or third parties.

<sup>17</sup> Version according to No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS 2016 3239).

<sup>18</sup> Inserted by No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS 2016 3239).

<sup>19</sup> Inserted by No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS 2016 3239).

**Art. 49**            Orientation under water

If there is a risk that the divers will no longer be able to find their way safely to the surface, suitable orientation devices must be installed to guide them under water.

**Art. 50**            Voice communication and monitoring

1 A communication network is to be installed that enables the following persons to speak in a suitable form:

- a. the signaller;
- b. the responsible person;
- c. the occupational physician;
- d. the rescue services.

2 There must be a state-of-the-art voice connection between the diver and the signaller.

3 From a diving depth of 10 metres, it must be possible to monitor diving parameters such as diving depths, diving time and decompression times..

4 During forensic, rescue, search and recovery diving operations, in particular dynamic diving operations, by police and rescue divers, during the associated basic diving training, during further training dives by police and rescue divers, a voice connection in accordance with paragraph 2 may be dispensed with if this is necessary, in particular due to the current conditions, the underwater topography, due to obstacles in the water and for the penetration of salvage objects.<sup>20</sup>

5 As part of their professional training activities, diving instructors may dive without voice connection in accordance with paragraph 2.<sup>21</sup>

**Art. 51<sup>22</sup>**           Guiding line and supply hose

1 The diver must be connected to a guiding line or a supply hose from the surface.

2 The guiding line and the supply hose must be designed in such a way as to ensure that the diver can be safely deployed in the water and that a missing or incapacitated diver can be found and safely rescued from the water.

3 The guiding line may be dispensed with, if:

- a. at least two divers with autonomous diving equipment dive simultaneously, work together as a group and can see each other or find each reliably by other means.

<sup>20</sup> Inserted by No. I of the Ordinance dated 16 Sept. 2016, in force since 1 Jan. 2018 (AS 2016 3239).

<sup>21</sup> Inserted by No. I of the Ordinance dated 16 Sept. 2016, in force since 1 Jan. 2018 (AS 2016 3239).

<sup>22</sup> Version according to No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS 2016 3239).

- b. a diver is diving alone, the diving depth is less than 10 metres, his or her position can be determined from the surface at any time and an immediate rescue from the surface is ensured;
- c. this would jeopardise the safety of a diver, especially in flowing waters, with technical installations, when entering a salvage object or due to the underwater topography.

## Section 2: Threshold limits

### Art. 52 Maximum diving depths

1 When using breathing air from the atmosphere, the maximum permissible diving depth is 40 metres.

2 When using breathing gas, the maximum permissible diving depth is based on the recognised rules for safe working in pressurised environments in accordance with Article 3. In any case, the following partial pressures must not be exceeded:

- a. for oxygen 1.4 bar when working in pressurised environments and 1.6 bar during decompression
- b. for nitrogen: 4.0 bar.

3 The maximum diving depth of the individual diver is also determined by the following:

- a. according to the diving depth specified in his or her training documentation; or
- b. according to the diving depth specified by the occupational physician on the basis of an assessment of medical fitness.

4 For diving instructors and police and rescue divers who are appropriately trained and regularly carry out diving operations, the maximum permissible diving depth when using breathing air from the atmosphere is 50 metres and when using breathing gas, the maximum permissible partial pressure of nitrogen is 5.0 bar.<sup>23</sup>

### Art. 53 Dive time and exposure-free time

1 For diving depths of more than 10 metres, the dive time must not exceed 3 hours per dive. The cumulative dive time must not exceed 6 hours per 24 hours. A work shift of 8 hours with one or more dives must be followed by an exposure-free period of at least 12 hours.

2 For diving depths of more than 10 metres, dives may not be made on more than 5 days within a 7-day period.. If the dives take place on 5 consecutive days, an exposure-free period of 48 hours must be observed.

<sup>23</sup> Inserted by No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS 2016 3239).

3 The daily dive time and the exposure-free time must be agreed upon with the occupational physician. In individual cases, the occupational physician may reduce these times according to the diver's current state of health.

### **Section 3: Deployment and minimum number of qualified persons**

#### **Art. 54** Deployment of qualified persons

1 If diving work is being carried out, in addition to the responsible person at the diving site, there must be sufficient qualified person on call to carry out the tasks set out in Article 12 and to rescue the divers.

2 The signaller must be in direct contact with the diver at all times.

#### **Art. 55** Minimum number of qualified persons

1 For diving work with autonomous diving equipment, at least the following persons must be present at the diving site:

- a. two divers in the water working together;
- b. two persons on the surface who are constantly monitoring the divers and ensuring the rescue..

2 For diving work with autonomous diving equipment and without increased risks in accordance with ;Article 44 paragraph 1 letters a-f, without special hazards in accordance with Article 58 and with diving depths of less than 10 metres, at least the following persons must be present at the diving site:

- a. a diver in the water who is connected to the surface by a safety line;
- b. a person on the surface who is continuously monitoring the diver and ensuring the rescue..

3 In the case of diving work with hose-supported air supply from the water surface, at least the following persons must be present at the diving site:

- a. a diver in the water;
- b. two persons on the surface who continuously monitor the diver and ensure the rescue, whereby one of these persons must be on diving standby.

4 In the case of diving work with hose-supported air supply from the water surface without increased risks in accordance with Article 44 paragraph 1 letters a-f. without special hazards in accordance with Article 58 and with diving depths of less than 10 metres, at least the following persons must be present at the diving site:

- a. a diver in the water;
- b. a person on the surface who is continuously monitoring the diver and ensuring the rescue..

5 During forensic, rescue, search and recovery operations, namely dynamic diving operations, by police and rescue divers, during the associated basic diving training, during further training and training dives by police and rescue divers and during the professional training activities of diving instructors, the diving team is made up of at least two divers.<sup>24</sup>

#### **Section 4: Underwater work with special hazards**

##### **Art. 56** Mechanical work

Mechanical work such as lifting, drilling, gripping and suction work may only be carried out when there are no more divers in the danger zone.

##### **Art. 57** Blasting

1 Explosive charges may only be prepared and detonated by persons or under the supervision of persons who hold a licence in accordance with Article 14 paragraph 1 of the Explosives Act of 25 March 1977<sup>25</sup>.

2 Before each detonation, the diver must climb completely out of the water. The person authorised to detonate explosives must check that the diver has not inadvertently carried off any detonators or explosive charges.

##### **Art. 58** Other work involving particular hazards

1 For other work involving particular hazards, such as the use of lifting bags, working with electrical equipment and cutting and welding work, use materials, products and equipment and work procedures that are suitable for use in water.

2 Work in accordance with paragraph 1 may only be carried out by a diver who is trained to do so.

3 When cutting and welding under water, the accumulation of oxyhydrogen gases **MUST** be avoided.

4 The use of liquid fuels is prohibited.

5 When working with electrical appliances, special hazardous situations such as a damp or electrically conductive environment and working in confined premises must be taken into consideration.

6 For electrical welding work, the recognised technical rules for welding work under water must be observed.

<sup>24</sup> Inserted by No. I of the Ordinance dated 16 Sept. 2016, in force since 15 Oct. 2016 (AS 2016 3239).

<sup>25</sup> SR 941.41

## Chapter 5: Concluding provisions

### Art. 59 Enforcement

The enforcement of this Ordinance is governed by the enforcement provisions of the UVG and in particular the VUV<sup>26</sup>.

### Art. 60 Withdrawal of another decree

The Ordinance of 20 January 1961<sup>27</sup> on Technical Measures for the Prevention of Accidents and Occupational Illnesses when working under Compressed Air is withdrawn.

### Art. 61 Change of another decree

...<sup>28</sup>

### Art. 61a<sup>29</sup>

### Art. 62 Coming into force

1 Subject to paragraph 2, this Ordinance comes into force on 01 January 2016.

2 Article 50 paragraph 2 comes into force as of 01 January 2018.

<sup>26</sup> SR **832.30**

<sup>27</sup> [AS **1961** 69, **2002** 3925]

<sup>28</sup> The change can be found under AS **2015** 1187.

<sup>29</sup> Introduced by No. I of the Ordinance of 13 April 2016 (AS **2016** 1151). Withdrawn by No. I of the Ordinance of 16. Sept. 2016, with effect since 15 Oct. 2016 (AS **2016** 3239).