

Occupational Health and Safety Act Loi sur la santé et la sécurité au travail

ONTARIO REGULATION 629/94

DIVING OPERATIONS

Consolidation Period: From June 3, 2004 to the [e-Laws currency date](#).

Last amendment: O.Reg. 155/04.

This Regulation is made in English only.

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**PART I
INTERPRETATION**

1. In this Regulation,

- “adequate”, in relation to a procedure, material, device, object or any other thing, means sufficient for its intended and actual use and sufficient to protect a worker from damage to the worker’s body or health, and “adequately” has a corresponding meaning;
- “atmospheric diving” means diving where the diver is always at one atmosphere;
- “atmospheric diving system” means a diving system designed to withstand external pressures greater than one atmosphere while the internal pressure remains at one atmosphere, and includes a one-person submarine and the one-atmosphere chamber of a lock-out submersible;
- “bail-out system” means an emergency breathing mixture supply worn by a diver;
- “bottom time” means the total elapsed time measured in minutes, from the time a descending diver leaves the surface to the time the diver begins final ascent, rounded to the next whole minute;
- “breathing mixture” means a mixture of gases for human respiration and includes pure oxygen;
- “decompression” means the procedure that a diver follows during the ascent from depth in order to minimize the risk of decompression sickness;
- “deep diving” means diving to depths greater than 165 feet;
- “dive site” means a surface location at which diving personnel and equipment are located in support of the underwater work site;
- “diver” means,
 - (a) an atmospheric diving system operator, and
 - (b) a worker who performs work underwater at any pressure greater than one atmosphere, and includes a standby diver who dives in the event of a health or safety emergency;
- “diver’s tender” means a person who assists a diver at the dive site by monitoring the diver’s equipment, communicating with the diver and otherwise monitoring the diver’s health and safety;
- “diving operation” means work performed underwater by divers or work performed on the surface in support of divers, and includes underwater inspection, investigation, excavation, construction, alteration, repair or maintenance of equipment, machinery, structures or ships and the salvage of sunken property;
- “employer associated with a diving operation” means an employer of,
 - (a) a diver who participates in the diving operation,

- (b) a standby diver who participates in the diving operation,
 - (c) a diver's tender who participates in the diving operation,
 - (d) a diving supervisor for the diving operation,
 - (e) a hyperbaric chamber operator who participates in the diving operation,
 - (f) a life support technician who participates in the diving operation, or
 - (g) any other worker who participates in the diving operation at or near the dive site or underwater work site;
- “hyperbaric chamber” means a pressure vessel and associated equipment designed for pressures greater than one atmosphere;
- “lifeline” means a safety rope used to tether a diver;
- “liveboating” means a diving operation conducted from a vessel the propeller of which is turning, whether the vessel is stationary or moving;
- “lock-out submersible” means a self-propelled submersible that is fitted with a submersible compression chamber from which a diving operation can be carried out and that has a separate one-atmosphere chamber from which the submersible is operated;
- “locked-out” means made inoperable by means that are under the direct control of the diving supervisor or a person authorized by the diving supervisor;
- “mixed gas” means a breathing mixture other than air;
- “non-saturation diving” means diving in which decompression occurs during ascent from the underwater work site;
- “saturation chamber” means a hyperbaric chamber that is equipped to permit divers to remain under pressure for an unlimited period of time;
- “saturation diving” means diving in which the decompression procedure used allows a bottom time of unlimited duration;
- “stage” means a cage, basket, platform or other device in or on which a diver may be lowered to or raised from an underwater work site but does not include a submersible compression chamber, an atmospheric diving system or a lock-out submersible;
- “standby diver” means a person who stands by at the dive site prepared to rescue a submerged diver should rescue become necessary;
- “submersible compression chamber” means a hyperbaric chamber that has the capacity to transport divers at pressures greater than one atmosphere from the surface to an underwater work site and back and includes a submersible compression chamber that is part of a lock-out submersible;
- “submersible compression chamber attendant” means a diver in a submersible compression chamber who,
- (a) assists a diver who has exited from the chamber by monitoring the diver's equipment, monitoring the diver's health and safety and communicating with the diving supervisor, and
 - (b) stands by prepared to rescue a diver who has exited from the chamber should rescue become necessary;
- “surface-supplied diving” means diving where the diver is supplied with a breathing mixture through an umbilical bundle, whether or not a submersible compression chamber is used;
- “umbilical bundle” means a composite of hoses, wires and cables designed to supply services, such as breathing mixtures, power, heat and communications, from the surface to a diver or to a submersible compression chamber;
- “underwater work site” means the underwater location where work is performed;
- “water control structure” includes dams, head gates, stop logs, turbine intake gates and pump intake gates;
- “wet bell” means a stage that is equipped with a dry upper compartment. O. Reg. 629/94, s. 1.

**PART II
GENERAL**

APPLICATION

- 2.** (1) This Regulation applies in relation to,
- (a) any diving operation; and
 - (b) any function in support of a diving operation. O. Reg. 629/94, s. 2 (1).
- (2) Despite subsection (1), this Regulation does not apply in relation to,
- (a) recreational diving, including any diving operation whose purpose is to train people for recreational diving;

- (b) any diving operation in which the only underwater breathing equipment used is snorkelling equipment;
 - (c) a dive the sole purpose of which is to respond to an unforeseen emergency situation involving imminent danger to the life, health or safety of any person, if the dive is undertaken voluntarily; or
 - (d) any function in support of a diving operation described in clause (a) or (b) or any dive described in clause (c). O. Reg. 629/94, s. 2 (2); O. Reg. 155/04, s. 1.
- (3) For the purposes of clause (2) (c), a dive is not undertaken voluntarily if it is related to a diving operation in relation to which the diver is paid. O. Reg. 629/94, s. 2 (3).

METHOD OF GIVING NOTICE TO MINISTRY

- 3.** (1) When this Regulation requires written notice to the Ministry, the notice shall be given,
- (a) by delivering it to the Diving Notice Address; or
 - (b) by sending it by fax using the Diving Notice Fax Number. O. Reg. 155/04, s. 2.
- (2) When this Regulation requires oral notice to the Ministry, the notice shall be given,
- (a) by telephoning the Diving Notice Telephone Number; or
 - (b) by sending the notice to the Ministry by other electronic means that are acceptable to the Ministry. O. Reg. 155/04, s. 2.
- (3) The Diving Notice Address, the Diving Notice Fax Number, the Diving Notice Telephone Number and instructions for sending notices in accordance with clause (2) (b) may be obtained from any Director. O. Reg. 155/04, s. 2.

EQUIVALENCY

- 4.** (1) An employer, owner, constructor or diving supervisor may vary a procedure required by this Regulation or a composition, design, size or arrangement of a material, object or device or thing required by this Regulation if,
- (a) the varied procedure, composition, design, size, or arrangement affords protection for the health and safety of workers that is at least equal to the protection that would otherwise be afforded;
 - (b) written notice of the variance has been given,
 - (i) to the joint health and safety committee or the health and safety representative, if any, or
 - (ii) to the Ministry, if there is no joint health and safety committee or health and safety representative; and
 - (c) a copy of the notice is available for inspection by an inspector at the dive site whenever the variance is used in a diving operation.
- (2) Subsection (1) does not apply in respect of any requirement in the Act or this Regulation to give notice. O. Reg. 629/94, s. 4.

DUTIES OF EMPLOYERS, CONSTRUCTORS AND OWNERS

- 4.1** (1) In this section,
- “Standard” means CSA Standard Z275.4-02, “Competency Standard for Diving Operations”. O. Reg. 155/04, s. 3.
- (2) An employer shall ensure that all persons who participate in a diving operation are trained to a level of competency equal to or exceeding the competency requirement of the Standard that applies to the type of diving operation being participated in. O. Reg. 155/04, s. 3.
- (3) For the purposes of subsection (2) and despite Clause 1.6 of the Standard, the Standard applies to scientific diving as defined in Clause 2.1 of the Standard. O. Reg. 155/04, s. 3.
- 5.** (1) Each constructor of a project where a diving operation is to take place, each employer associated with a diving operation and each owner associated with a diving operation shall ensure that the Ministry is given notice of the diving operation.
- (2) Notice under subsection (1) shall be given,
- (a) in writing before the diving operation begins; or
 - (b) orally before the diving operation begins and in writing within 30 days after the day on which the diving operation begins.
- (3) Despite subsection (2), where a breathing mixture other than air is expected to be used in the diving operation, the notice shall be given in writing before the diving operation begins.
- (4) Written notice under subsection (1) shall be given on a form obtained for the purpose from the Ministry and shall include the following:

1. Information sufficient to permit an inspector to locate the dive site.
 2. The expected starting date and duration of the diving operation.
 3. The dates when and times of day during which the diving operation is expected to be carried out.
 4. The name, mailing address and telephone number of an owner, constructor or employer who is associated with the diving operation.
 5. The name of the diving supervisor appointed under section 6.
 6. The expected maximum depth of any dive in the diving operation.
 7. A description of the tasks expected to be performed in the diving operation.
 8. The breathing mixtures expected to be used in the diving operation.
 9. A statement whether the diving operation is to be offshore or onshore.
 10. A statement whether recirculating S.C.U.B.A. is to be used in the diving operation.
 11. A statement whether the diving operation is one to which Part XI applies.
- (5) Oral notice under subsection (1) shall include the following:
1. Information sufficient to permit an inspector to locate the dive site.
 2. The expected starting date and duration of the diving operation.
 3. The dates when and times of day during which the diving operation is expected to be carried out.
 4. The name, mailing address and telephone number of an owner, constructor or employer who is associated with the diving operation.
 5. A statement whether the diving operation is to be offshore or onshore.
- (6) Each person responsible for ensuring that notice of a diving operation is given under subsection (1) shall also ensure that notice is given in writing to the Ministry of any departure from the plans described in the notice under subsection (1).
- (7) Notice under subsection (6) shall be given before the departure where reasonably possible and, in any event, as soon as reasonably possible. O. Reg. 629/94, s. 5.
- 6.** Each person responsible for ensuring that notice of a diving operation is given under subsection 5 (1) shall also ensure,
- (a) that one or more competent persons are appointed as diving supervisors for the diving operation; and
 - (b) that one of the persons appointed under clause (a) is present at the dive site or, where required by clause 49 (3) (b), in the lock-out submersible, and is acting as diving supervisor whenever the diving operation is being carried out. O. Reg. 629/94, s. 6.
- 7.** (1) Each person responsible for ensuring that notice of a diving operation is given under subsection 5 (1) shall also ensure that a written operational plan and a written contingency plan for the diving operation are prepared, with input from one or more of the diving supervisors appointed for the diving operation under section 6.
- (2) An operational plan shall,
 - (a) describe the tasks to be performed in the diving operation;
 - (b) state how the tasks referred to in clause (a) are to be performed;
 - (c) state how the hazards that could be encountered in the diving operation are to be identified and handled; and
 - (d) state which agencies, plants and facilities will be given notice under section 9.
 - (3) A contingency plan shall,
 - (a) include instructions for communicating with medical assistance in the event of an emergency;
 - (b) outline emergency procedures for the evacuation of an injured diver from the dive site;
 - (c) outline emergency procedures for responding to any significant failure of a component of any diving equipment;
 - (d) outline emergency procedures for responding to a loss of communications with a diver;
 - (e) outline emergency procedures for responding to hazardous weather or ice conditions;
 - (f) outline emergency procedures for aborting a dive; and
 - (g) outline emergency procedures for responding to any inability of an offshore dive site to maintain station. O. Reg. 629/94, s. 7.

8. Each person responsible for ensuring that notice of a diving operation is given under subsection 5 (1) shall also ensure that each of the following is available for inspection by an inspector at the dive site whenever the diving operation is being carried out:

1. A copy of any written notice that has been given in respect of the diving operation under subsection 5 (1).
2. Where written notice has not yet been given in respect of the diving operation under subsection 5 (1), a written statement including the date of the oral notice given in respect of the diving operation and the name of the person to whom the oral notice was given.
3. A copy of the operational plan prepared for the diving operation under section 7.
4. A copy of the contingency plan prepared for the diving operation under section 7.
5. A copy of this Regulation.
6. A copy of any standard published by the Canadian Standards Association and referred to in this Regulation that may apply to the diving operation. O. Reg. 629/94, s. 8.

9. (1) Each person responsible for ensuring that notice of a diving operation is given under subsection 5 (1) shall also ensure that notice of the diving operation is given to,

- (a) each law enforcement agency that,
 - (i) has responsibilities in relation to the area in which the dive site is located, and
 - (ii) would need to know about the diving operation in order to ensure that it is carried out safely and in a manner that takes into account other activities and events in the area;
- (b) each industrial plant that is within two kilometres of the dive site and might discharge effluent that would be harmful to the health or safety of a worker associated with the diving operation; and
- (c) each water control facility, such as a hydro-electric authority, or water intake plant that is within one kilometre of the dive site.

(2) For the purposes of clause (1) (a), examples of law enforcement agencies include harbour commissions, harbour masters, navigable water authorities and police departments.

(3) For the purposes of subsection (1), notice is given to an agency, plant or facility when it is given to a person with control over or responsibility for the agency, plant or facility.

(4) Notice under subsection (1) shall include the following:

1. Information sufficient to permit the person receiving the notice to locate the dive site.
2. The expected starting date and duration of the diving operation.
3. The dates when and times of day during which the diving operation is expected to be carried out.
4. The name, mailing address and telephone number of an owner, constructor or employer who is associated with the diving operation.

(5) Notice under subsection (1) shall be given before the diving operation begins and may be given orally or in writing. O. Reg. 629/94, s. 9.

10. (1) Each person responsible for ensuring that notice of a diving operation is given under subsection 5 (1) shall also ensure that the Ministry is given written notice if any of the following incidents occur in connection with the diving operation:

1. A diver becoming trapped underwater.
2. A diver failing to comply with the decompression requirements of this Regulation.
3. Failure of any diving equipment posing a risk to the health or safety of a diver.
4. Emergency rescue of a diver in a submersible compression chamber or atmospheric diving system.
5. Emergency use of a recompression chamber.
6. A person becoming unconscious.
7. A diver suffering from decompression sickness.

(2) A notice under subsection (1) shall be given within two days of the incident and shall include the following:

1. The name, mailing address and telephone number of an owner, constructor or employer associated with the diving operation.
2. The nature and circumstances of the incident and the injury or illness, if any, sustained by any person as a result of the incident.

3. The time and place of the incident.
4. The name and address of any person who sustained injury or illness as a result of the incident.
5. The steps taken to prevent a recurrence. O. Reg. 629/94, s. 10.

NOTICES AND REPORTS

11. (1) A written report under subsection 51 (1) of the Act respecting an occurrence in which a person is killed or critically injured shall set out,

- (a) the name and address of the person submitting the report;
- (b) the nature and the circumstances of the occurrence and the bodily injury sustained by the person;
- (c) a description of any machinery, equipment or procedure involved;
- (d) the time and place of the occurrence;
- (e) the name and address of the person who was killed or critically injured;
- (f) the names and addresses of all witnesses to the occurrence;
- (g) the name and address of the physician or surgeon, if any, by whom the person was or is being attended for the injury; and
- (h) the steps taken to prevent a recurrence.

(2) A written notice under subsection 52 (1) of the Act respecting an occurrence shall set out,

- (a) the name and address of the person submitting the notice;
- (b) the nature and the circumstances of the occurrence and the injury or illness sustained by any person as a result of the occurrence;
- (c) a description of any machinery, equipment or procedure involved;
- (d) the time and place of the occurrence;
- (e) the name and address of any person who sustained injury or illness as a result of the occurrence;
- (f) the names and addresses of all witnesses to the occurrence;
- (g) the name and address of the physician or surgeon, if any, by whom the person was or is being attended for the injury or illness; and
- (h) the steps taken to prevent a recurrence.

(3) A written notice under subsection 52 (2) of the Act respecting an illness shall set out,

- (a) the name and address of the person submitting the notice;
- (b) the nature of the occupational illness;
- (c) the name and address of the worker involved;
- (d) the name and address of the physician or surgeon, if any, by whom the worker was or is being attended for the illness; and
- (e) the steps taken to prevent a recurrence. O. Reg. 629/94, s. 11.

DUTIES OF DIVING SUPERVISORS

12. (1) The diving supervisor for a diving operation shall have his or her diving log book or equivalent statement of diving experience at the dive site and available for inspection by an inspector.

(2) The diving supervisor for a diving operation shall be present at the dive site or, where required by clause 49 (3) (b), in the lock-out submersible and shall be in direct control of the diving operation whenever the diving operation is being carried out.

(3) The diving supervisor for a diving operation shall,

- (a) ensure that the operational plan and the contingency plan for the diving operation are followed;
- (b) brief the workers associated with the diving operation on the operational plan, the contingency plan and the procedures to be followed during the diving operation;
- (c) ensure that each diver participating in the diving operation is competent and fit to perform the work;
- (d) ensure that each diver has his or her diving log book at the dive site and available for inspection by an inspector;

- (e) immediately before each dive, review the nature of the hazards that could be encountered in the underwater work site and brief divers on those hazards;
 - (f) ensure that any diving equipment to be used in the diving operation is examined by a competent person at least once on each day on which it is to be used, before the use, and is tested and repaired as appropriate;
 - (g) ensure that, whenever the diving operation is being carried out, adequate warning devices are displayed to indicate the area around the dive site that is to be kept clear of any equipment other than that associated with the diving operation;
 - (h) except in the case of a health or safety emergency, ensure that a diver is not permitted to remain at any depth longer than the maximum time planned for the depth of the dive;
 - (i) supervise all decompression and therapeutic recompression in strict accordance with adequate decompression procedures and tables;
 - (j) terminate or interrupt the diving operation if, in the diving supervisor's opinion, continuance of the operation is likely to endanger the health or safety of any worker.
- (4) The diving supervisor for a diving operation shall supervise the standby divers associated with the diving operation and, in particular, shall,
- (a) ensure that an adequate number of standby divers are present and properly positioned at the dive site so that each submerged diver can be reached as quickly as possible in the event that he or she needs to be rescued;
 - (b) ensure that no person is permitted to act as a standby diver unless he or she is adequately trained, having regard to the depths and circumstances in which the standby diver would have to operate should a rescue become necessary;
 - (c) ensure that each standby diver is adequately dressed and has adequate diving and communication equipment checked, ready and at hand, having regard to the depths and circumstances in which the standby diver would have to operate should a rescue become necessary;
 - (d) ensure that each standby diver who uses S.C.U.B.A. is equipped with a lifeline that is at least 10 feet longer than the lifeline of any submerged diver whom the standby diver might need to rescue;
 - (e) ensure that each standby diver who uses surface-supplied diving equipment is equipped with an umbilical bundle that is at least 10 feet longer than the umbilical bundle of any submerged diver whom the standby diver might need to rescue;
 - (f) ensure that no standby diver is assigned to any duties other than,
 - (i) duties of standby diver,
 - (ii) where the standby diver is also acting as diving supervisor, duties of diving supervisor, and
 - (iii) duties of communicating with a submerged diver;
 - (g) ensure that no standby diver dives except in the event of a health or safety emergency;
 - (h) ensure that each standby diver has his or her diving log book at the dive site and available for inspection by an inspector; and
 - (i) ensure that no person is permitted to act as a standby diver unless he or she is knowledgeable about,
 - (i) the operational plan and the contingency plan for the diving operation,
 - (ii) the diving equipment to be used in the diving operation,
 - (iii) the diving signals to be used in the diving operation,
 - (iv) the in-water decompression procedures to be used in the diving operation, and
 - (v) any emergency procedures that might have to be used in the diving operation.
- (5) The diving supervisor for a diving operation shall supervise the divers' tenders associated with the diving operation and, in particular, shall,
- (a) ensure that a diver's tender is acceptable to each diver to be tended by him or her;
 - (b) ensure that no diver's tender is assigned to any duties other than,
 - (i) duties of diver's tender,
 - (ii) where the diver's tender is also acting as diving supervisor, duties of diving supervisor, and
 - (iii) duties permitted to be performed by a diver's tender under clause 30 (1) (d);
 - (c) ensure that no person is permitted to act as a diver's tender unless he or she is knowledgeable about the matters mentioned in clause (4) (i).

- (6) The diving supervisor for a diving operation shall supervise the submersible compression chamber attendants associated with the diving operation and, in particular, shall,
- (a) ensure that, whenever a submersible compression chamber is being used to carry out the diving operation, a submersible compression chamber attendant is present in the chamber;
 - (b) ensure that no person is permitted to act as a submersible compression chamber attendant unless he or she is adequately trained, having regard to the depths and circumstances in which the attendant would have to operate should a rescue become necessary;
 - (c) ensure that each submersible compression chamber attendant is adequately dressed and has adequate diving and communication equipment checked, ready and at hand, having regard to the depths and circumstances in which the attendant would have to operate should a rescue become necessary;
 - (d) ensure that each submersible compression chamber attendant is equipped with a lifeline that is at least 10 feet longer than the lifeline of any diver who has exited the submersible compression chamber and whom the attendant might need to rescue;
 - (e) ensure that each submersible compression chamber attendant is equipped with an umbilical bundle that is at least 10 feet longer than the umbilical bundle, if any, of any diver who has exited the submersible compression chamber and whom the attendant might need to rescue;
 - (f) ensure that no submersible compression chamber attendant is assigned to any duties other than those of submersible compression chamber attendant;
 - (g) ensure that no submersible compression chamber attendant exits the submersible compression chamber underwater except in the event of a health or safety emergency;
 - (h) ensure that each submersible compression chamber attendant has his or her diving log book at the dive site and available for inspection by an inspector;
 - (i) ensure that a submersible compression chamber attendant is acceptable to each diver to be attended by him or her;
 - (j) ensure that no person is permitted to act as a submersible compression chamber attendant unless he or she is knowledgeable about the matters mentioned in clause (4) (i).
- (7) Except in the event of a health or safety emergency or where required by subsection (2), a person acting as a diving supervisor for a diving operation shall not dive. O. Reg. 629/94, s. 12.

DUTIES OF DIVERS AND STANDBY DIVERS

- 13.** (1) Before participating in a diving operation, a diver or standby diver shall ensure that he or she,
- (a) understands the operational plan and the contingency plan for the diving operation;
 - (b) is aware of the hazards that could be encountered in the underwater work site;
 - (c) has his or her diving log book at the dive site and available for inspection by an inspector;
 - (d) has undergone a medical examination in accordance with section 32;
 - (e) has a physician's statement, obtained in accordance with section 32, at the dive site and available for inspection by an inspector;
 - (f) is not fatigued;
 - (g) is not impaired in his or her diving ability because of consumption of alcohol or drugs; and
 - (h) is satisfied that all workers associated with the diving operation have an adequate understanding of the operational plan and the contingency plan.
- (2) A diver or standby diver who is unfit to dive shall promptly inform the diving supervisor of that fact and shall refrain from diving or from acting as standby diver.
- (3) Immediately before diving, while at the dive site, a diver or standby diver shall check that he or she has all the necessary personal diving equipment and that it is all functioning properly.
- (4) At the onset of any sign of equipment malfunction or distress on the part of any submerged diver, a diver shall, if possible, notify the diver's tender, the diving supervisor and any diving partner and terminate the dive.
- (5) On completion of any dive for which this Regulation does not require decompression, a diver, other than an atmospheric diving system operator, shall remain under observation in the presence of the diving supervisor for a period set by the diving supervisor.
- (6) On completion of any dive for which this Regulation requires decompression, a diver, other than an atmospheric diving system operator, shall remain under observation at the dive site for at least one hour.

(7) Where the diving supervisor is of the opinion that, because of the nature of a dive to which subsection (6) applies, a diver should remain under observation for a period longer than one hour, the diver shall remain under observation at the dive site for such longer period as the diving supervisor sets.

(8) A diver, other than an atmospheric diving system operator, shall not fly at an altitude greater than 1,000 feet above the dive site during,

- (a) the 12-hour period following a no-decompression dive;
- (b) the 24-hour period following an air dive requiring decompression;
- (c) the 24-hour period following a mixed gas dive requiring decompression with a bottom time of less than two hours;
- (d) the 48-hour period following a mixed gas dive requiring decompression with a bottom time of two hours or longer;
- (e) the 72-hour period following a saturation dive; and
- (f) any period set by an attending physician following treatment for decompression sickness.

(9) A standby diver shall ensure that he or she,

- (a) does not dive except in the event of a health or safety emergency;
 - (b) does not perform any duties other than,
 - (i) duties of standby diver,
 - (ii) where he or she is also acting as diving supervisor, duties of diving supervisor, and
 - (iii) duties of communicating with a submerged diver; and
 - (c) is adequately dressed and has adequate diving and communication equipment checked, ready and at hand, having regard to the depths and circumstances in which the standby would have to operate should a rescue become necessary.
- (10) A submersible compression chamber attendant shall ensure that he or she,
- (a) does not exit the submersible compression chamber except in the event of a health or safety emergency;
 - (b) does not perform any duties other than those of a submersible compression chamber attendant; and
 - (c) is adequately dressed and has adequate diving and communication equipment checked, ready and at hand, having regard to the depths and circumstances in which the attendant would have to operate should a rescue become necessary. O. Reg. 629/94, s. 13.

DUTIES OF DIVER'S TENDERS

14. A diver's tender shall ensure that he or she does not perform any duties other than,

- (a) duties of diver's tender;
- (b) where he or she is also acting as diving supervisor, duties of diving supervisor; and
- (c) duties permitted to be performed by a diver's tender under clause 30 (1) (d). O. Reg. 629/94, s. 14.

PART III EQUIPMENT

DIVING EQUIPMENT — GENERAL

15. (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that all diving equipment to be used in the diving operation is adequate.

(2) Without limiting the generality of subsection (1), each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that all diving equipment to be used in the diving operation,

- (a) is of sound construction and adequate strength and is free from patent defects;
- (b) is adequately maintained;
- (c) is tested and repaired by a competent person in accordance with the manufacturer's recommended procedures; and
- (d) is constructed in a way that ensures against malfunctions caused by low air or water temperatures or by the expansion of air or gas.

(3) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that all written material necessary for adequate dive site maintenance and operation of all diving equipment to be used in the diving operation is available at the dive site.

(4) For the purposes of subsection (3), examples of written material include operation manuals, field manuals, maintenance manuals, alerts and safety checklists.

(5) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any compressed gas cylinder to be used in the diving operation is hydrostatically tested and visually inspected in accordance with the Canadian Standards Association Standard, Z275.2-92, "Occupational Safety Code for Diving Operations". O. Reg. 629/94, s. 15.

PERSONAL DIVING EQUIPMENT

16. (1) A diver participating in a diving operation and the diving supervisor for the diving operation shall ensure that the diver is adequately equipped.

(2) A standby diver participating in a diving operation and the diving supervisor for the diving operation shall ensure that the standby diver is adequately equipped.

(3) Without limiting the generality of subsection (1), a diver, other than an atmospheric diving system operator, participating in a diving operation and the diving supervisor for the diving operation shall ensure that the diver is equipped with,

- (a) a knife that is adequately strong and sharp;
- (b) adequate weights;
- (c) an adequate diving suit or, where a diving suit is not necessary because of the circumstances of the dive, other adequate protective clothing;
- (d) an adequate diving harness that,
 - (i) is strong enough to lift the diver and his or her personal equipment from the water in an emergency,
 - (ii) is equipped with a positive buckling device, and
 - (iii) where the diver wears an umbilical bundle, is equipped with an attachment point for the lifeline that adequately ensures against strain on the diver's hose, mask and helmet.

(4) Without limiting the generality of subsection (2), a standby diver participating in a diving operation and the diving supervisor for the diving operation shall ensure that the standby diver is equipped with the things mentioned in subsection (3). O. Reg. 629/94, s. 16.

DIVE SITE EQUIPMENT

17. (1) The diving supervisor for a diving operation shall ensure that, whenever diving is in progress, the dive site is adequately equipped.

(2) Without limiting the generality of subsection (1), the diving supervisor for a diving operation shall ensure, whenever diving is in progress, that the dive site is equipped with,

- (a) an adequate quantity of oxygen for use for therapeutic purposes in the event of an emergency;
- (b) a first-aid kit that is adequate having regard to the nature and circumstances of the diving operation;
- (c) a set of adequate decompression tables;
- (d) where appropriate because of temperature conditions, an adequate climate-controlled facility for the use of workers that is located at or adequately near to the dive site;
- (e) an adequate two-way communication system connecting the dive site with medical assistance;
- (f) adequate means to facilitate the entry and exit of divers to and from the water;
- (g) adequate means to facilitate the immediate exit from the water of an unconscious diver; and
- (h) any other equipment that may be required to protect the health and safety of workers, having regard to the nature and circumstances of the diving operation.

(3) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that the dive site is of sufficient size to accommodate all workers and equipment needed for the diving operation without overcrowding.

(4) Where a diving operation is to be conducted from an offshore dive site, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that, whenever there are workers present at the dive site,

- (a) there are at least two adequate means of evacuating workers from the dive site; or
- (b) a boat equipped with an adequate primary motor and an adequate back-up motor is available at the dive site as a means of evacuating workers from the dive site.

(5) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any vessel used in the diving operation is capable of maintaining station or of being anchored or moored without risk to any diver. O. Reg. 629/94, s. 17.

LIFELINES

18. (1) The diving supervisor for a diving operation shall ensure that an adequate lifeline is attached to each diver, other than an atmospheric diving system operator, participating in the diving operation at all times when he or she is in the water.

(2) Without limiting the generality of subsection (1), the diving supervisor for a diving operation shall ensure that any lifeline used in the diving operation,

- (a) is of sound construction and adequate strength and is free from patent defects;
- (b) is adequately maintained;
- (c) is free of knots, other than knots necessary to attach the lifeline to the diver and the dive site, is free of splices and has a breaking strength of not less than 2,450 kilograms;
- (d) is securely attached to the diver's harness;
- (e) is no longer than is reasonably required to perform the work;
- (f) where the diver is using surface-supplied diving techniques, is attached securely to the dive site;
- (g) where the diver is using S.C.U.B.A., is attached securely to the dive site or to a float visible to the diver's tender;
- (h) where the diver is operating from a submersible compression chamber or a lock-out submersible, is attached securely to the chamber or submersible;
- (i) where the diver is using surface-supplied diving techniques, is tended at all times by a diver's tender by continuously holding the lifeline;
- (j) where the diver is using S.C.U.B.A., is tended at all times by a diver's tender, by continuously holding the lifeline or, in the case of a lifeline attached to a float, by continuously observing the float;
- (k) where the diver is operating from a submersible compression chamber, is attended at all times by a submersible compression chamber attendant by continuously holding the lifeline; and
- (l) where the diver is using an umbilical bundle, is incorporated in the umbilical bundle.

(3) Despite subsection (1) and clauses (2) (g) and (j), where, because of the nature of the work, a diver using S.C.U.B.A. cannot operate safely while tethered by a lifeline to the dive site or a float, the diving supervisor may permit the diver to operate untethered, so long as the diver is accompanied by another diver who,

- (a) is using a lifeline in accordance with clauses (2) (g) and (j); and
- (b) is in continuous visual contact with the untethered diver. O. Reg. 629/94, s. 18.

COMMUNICATIONS

19. (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that each submerged diver is connected to the dive site or, where the diving supervisor is in the one atmosphere chamber of a lock-out submersible, to the diving supervisor, by a two-way communication system that is adequate and that meets the requirements of subsections (2) to (5).

(2) Subject to subsection (3), the two-way communication system may be by voice or by pre-arranged line signals.

(3) The two-way communication system must be by voice where,

- (a) the depth of the dive exceeds 100 feet;
- (b) a diver uses any power tool, explosive, burning equipment or welding equipment;
- (c) a diver directs the use of any hoisting device to place any materials underwater while the diver is underwater;
- (d) a diver works in or near a pipe, tunnel, duct, underwater intake or other confined space or in or near a water control structure;
- (e) a diver places any materials underwater in a way that poses a risk to the health or safety of the diver;
- (f) an atmospheric diving system is used;
- (g) a wet bell is used;
- (h) a submersible compression chamber is used; or
- (i) the diving operation is one to which Part XI applies.

- (4) For the purposes of clause (3) (d), a diver works near a thing where the proximity of the thing to the diver poses a health or safety risk to the diver.
- (5) The two-way voice communication system must,
- (a) afford sound reproduction that enables the diver's breathing to be heard clearly; and
 - (b) where a breathing mixture containing helium or any other gas that significantly distorts voice transmission is used, unscramble voices effectively.
- (6) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that,
- (a) all communication through a two-way voice communication system used for a dive to a depth greater than 165 feet or for a dive using an atmospheric diving system is continuously recorded; and
 - (b) the recordings referred to in clause (a) are saved for at least 48 hours after they are made.
- (7) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that each submerged diver operating at a depth greater than 100 feet is connected to the dive site by an adequate back-up two-way communications system that is independent of the primary communications system required by subsection (1).
- (8) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any atmospheric diving system or submersible compression chamber used in a diving operation is provided with an adequate back-up two-way communications system that is independent of the primary communications system required by subsection (1). O. Reg. 629/94, s. 19.

CRANES AND HOISTING DEVICES

- 20.** (1) Where a crane or other hoisting device is used to lower a stage carrying a diver into the water, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that,
- (a) the crane or other hoisting device remains available throughout the dive for the immediate recovery of the diver if required in the event of an emergency; and
 - (b) except in the event of an emergency, all directions to the operator of the crane or other hoisting device are given, throughout the dive, by the diver, the diver's tender or the diving supervisor.
- (2) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that a diver who is being lowered in a stage into the water by means of a crane or other hoisting device is continuously able to communicate with the diving supervisor by using pre-arranged visual or line signals or a two-way voice communication system.
- (3) Each employer associated with a diving operation shall ensure that any crane or other hoisting device used in a diving operation is adequate.
- (4) Without limiting the generality of subsection (3), each employer associated with a diving operation shall ensure that any crane or other hoisting device used in a diving operation,
- (a) is of sound construction and adequate strength and is free from patent defects;
 - (b) is equipped with a failsafe mechanism that will prevent the boom from descending or telescoping in the event of a power source failure or hoisting system failure;
 - (c) is equipped with a brake or mechanical locking device that is applied automatically when the control lever, handle or switch is not held in the operating position;
 - (d) is equipped with brakes that can stop and hold 100 per cent of the maximum working load with the outermost layer of wire on the drum;
 - (e) is so constructed that any brakes that are power released will be applied automatically on loss of power;
 - (f) is so constructed that the lowering and raising of loads is controlled by power drives that are independent of the brake mechanism;
 - (g) is not fitted with a pawl-and-ratchet gear on which the pawl has to be disengaged before commencing the lowering or raising of the load; and
 - (h) is constructed in a way that ensures against malfunctions at low temperatures.
- (5) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any crane or other hoisting device to be used in the diving operation is adequately maintained and is examined by a competent person at least once on each day on which it is to be used.
- (6) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any cable used with a crane or other hoisting device in the diving operation is used in accordance with the Code for Cable, Slings and Rigging, dated July 4, 1994 and issued by the Ministry.

(7) Where a crane or other hoisting device is used to lower a submersible compression chamber or atmospheric diving system into the water, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that, except in the event of an emergency, all directions to the operator of the crane or other hoisting device are given, throughout the dive, by the diving supervisor.

(8) Where a crane or other hoisting device is used to lower a submersible compression chamber or atmospheric diving system into the water, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that the crane or other hoisting device is equipped with,

- (a) a primary lifting cable that permits the chamber or system to be lowered safely to the maximum depth of the dive and to be returned safely to the surface, without undue lateral, vertical or rotational movement;
- (b) a secondary lifting cable that is,
 - (i) readily available at the dive site, and
 - (ii) compatible with the secondary lifting eye or similar device.

(9) Where a crane or other hoisting device is used to lower a submersible compression chamber that is not part of a lock-out submersible into the water, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that, during any air-water interface transfer, the crane or other hoisting device is equipped with a safety rope that will, in the event of the primary cable breaking, cause the chamber to stop immediately below the turbulent wave zone. O. Reg. 629/94, s. 20.

FALL ARREST SYSTEMS

21. (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that an adequate system to arrest the fall of a stage is used whenever a diver is being lowered into the water by a stage and there is a possibility that the stage might fall,

- (a) a distance of more than 10 feet;
- (b) into or onto operating machinery; or
- (c) into or onto a hazardous substance or object.

(2) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that the fall arrest system,

- (a) is adequately secured to a fixed support at the dive site or to a line that is securely fastened to a fixed support at the dive site;
- (b) is so designed that if the stage falls, the stage will be suspended not more than five feet below the location it occupied before the fall; and
- (c) is attached to a secondary lifting eye or similar device that is of at least the same strength as the primary lifting eye for the stage.

(3) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that the fixed support referred to in clause (2) (a) is capable of resisting any arrest forces in the event of a fall and is free of sharp edges that might cut or chafe the connection between the fall arrest system and the fixed support. O. Reg. 629/94, s. 21.

STAGES

22. (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any stage used in the diving operation is adequate.

(2) Without limiting the generality of subsection (1), each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any stage used in the diving operation,

- (a) is of sufficient size to accommodate all workers and equipment needed for the diving operation without overcrowding;
- (b) is secure against tipping and spinning;
- (c) does not contain any equipment that might interfere with an occupant's foothold or handhold;
- (d) is so constructed or equipped that the occupants are secure against falling out of the stage;
- (e) is equipped with hand and foot holds arranged so that crushed hand and foot injuries are avoided;
- (f) is designed in accordance with good engineering practice; and
- (g) is so constructed that it is adequate for the purpose for which it is to be used. O. Reg. 629/94, s. 22.

HYPERBARIC CHAMBERS

23. (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that a hyperbaric chamber is at the dive site during any dive that exceeds,

- (a) the no-decompression limit given by the decompression tables used for the dive; or
 - (b) a depth of 100 feet. O. Reg. 629/94, s. 23 (1).
- (2) Subsection (1) does not apply in relation to a dive where the diver is always at one atmosphere. O. Reg. 629/94, s. 23 (2).
- (3) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that a hyperbaric chamber is at the dive site during any dive where that would be reasonable in the circumstances for the protection of the diver. O. Reg. 629/94, s. 23 (3).
- (4) Each employer associated with a diving operation shall ensure that any hyperbaric chamber used on land in the diving operation has been registered with the Technical Standards and Safety Authority, for use in Ontario. O. Reg. 629/94, s. 23 (4); O. Reg. 155/04, s. 4.
- (5) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any hyperbaric chamber used in the diving operation, other than as a submersible compression chamber or saturation chamber, conforms to and is operated in accordance with the requirements specified in clauses 1 to 9 of the Canadian Standards Association Standard, Z275.1-93, "Hyperbaric Facilities". O. Reg. 629/94, s. 23 (5).
- (6) Each employer associated with a diving operation and the diving supervisor for a diving operation shall, in the case of a dive for which a hyperbaric chamber is used other than as a submersible compression chamber or saturation chamber, ensure that a quantity of air or adequate mixed gas is available with the hyperbaric chamber that is twice the quantity required,
- (a) to pressurize the hyperbaric chamber to a pressure equivalent to the pressure at the greatest depth in respect of which the hyperbaric chamber is used in the dive or to the pressure at 165 feet, whichever is greater; and
 - (b) to ventilate the hyperbaric chamber at this pressure. O. Reg. 629/94, s. 23 (6).

GAUGES AND METERING EQUIPMENT

- 24.** (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any gauge or metering equipment to be used in the diving operation is adequate and has been tested by a competent person within the 12-month period immediately preceding any use of it.
- (2) Where it appears, whether from inconsistent readings or otherwise, that any gauge or metering equipment to be used in a diving operation may be malfunctioning, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that the gauge or metering equipment is examined and repaired by a competent person so that it operates adequately before its next use.
- (3) Where the examination and repair required by subsection (2) do not occur immediately after it appears that a gauge or metering equipment may be malfunctioning, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that, until the examination and repair occur, the gauge or metering equipment is clearly labelled in a way that states that it is not to be used until repaired. O. Reg. 629/94, s. 24.

PART IV BREATHING MIXTURES

GENERAL REQUIREMENTS

- 25.** (1) The diving supervisor for a diving operation shall ensure that no diver participating in the diving operation is permitted to dive without a breathing mixture and breathing mixture supply system that are adequate, having regard to the depths and circumstances in which the diver will be operating.
- (2) The diving supervisor for a diving operation shall ensure that any breathing mixture used in the diving operation conforms to Canadian Standards Association Standard, Z275.2-92, "Occupational Safety Code for Diving Operations".
- (3) Except for decompression or therapeutic purposes, the diving supervisor for a diving operation shall ensure that no diver participating in the diving operation is given pure oxygen as a breathing mixture unless notice is given under paragraph 10 of subsection 5 (4).
- (4) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any breathing mixture supply system used in the diving operation is designed to ensure that,
- (a) an interruption of the breathing mixture supply to one diver will not affect the supply of breathing mixture to any other diver; and
 - (b) an interruption of the primary breathing mixture supply to a diver will not affect the delivery of breathing mixture from,
 - (i) any emergency bail-out system worn by the diver,
 - (ii) any emergency reserve system worn by the diver, or
 - (iii) any secondary breathing mixture supply;

- (c) an interruption of the primary breathing mixture supply to a submersible compression chamber will not affect the delivery of breathing mixture from any emergency reserve system attached to the chamber; and
- (d) an interruption of the primary breathing mixture supply in an atmospheric diving system will not affect delivery of breathing mixture from any secondary breathing mixture supply in the atmospheric diving system. O. Reg. 629/94, s. 25.

QUANTITIES OF PRIMARY AND SECONDARY BREATHING MIXTURE SUPPLIES

- 26.** (1) The diving supervisor for a diving operation shall ensure that the total supply of breathing mixture that is available at the dive site at any time during a dive consists of,
- (a) an adequate primary supply to complete the dive as planned; and
 - (b) an adequate secondary supply.
- (2) The secondary supply referred to in clause (1) (b) shall at the start of a dive consist of,
- (a) in the case of a dive in which S.C.U.B.A. is used, one complete S.C.U.B.A. unit, including regulator and fully charged cylinder, in addition to the sets required for the divers and standby divers;
 - (b) in the case of a dive in which surface-supplied diving techniques are used, an adequate supply of breathing mixture to allow the diver to return to the surface and undergo any in-water decompression that might be required;
 - (c) in the case of a dive in which a submersible compression chamber or atmospheric diving system is used, an adequate supply of breathing mixture to enable the occupants of the chamber or system to return to the surface;
 - (d) in the case of a dive in which an on-line gas blender or diver's gas recovery system is used, an adequate supply of pre-mixed breathing mixture to allow the divers to return to the surface and undergo any in-water decompression that might be required; and
 - (e) in the case of a dive in which a hyperbaric chamber is used, an adequate supply of breathing mixture to allow the diver to undergo any decompression that might be required and undergo any treatment that might be required for decompression sickness. O. Reg. 629/94, s. 26.

EMERGENCY RESERVE AND BAIL-OUT SYSTEMS

- 27.** A diver participating in a diving operation and the diving supervisor for the diving operation shall ensure that, when an emergency bail-out system or an emergency reserve system is used in the diving operation,
- (a) an adequate breathing mixture is provided in the system; and
 - (b) the total quantity of the breathing mixture in the system is,
 - (i) when carried by the diver, sufficient to enable the diver to safely reach the surface, submersible compression chamber, lock-out submersible or wet bell, as the case may be,
 - (ii) when carried by a submersible compression chamber that is not part of a lock-out submersible, sufficient to meet the needs of the occupants of the chamber for a minimum of 24 hours, and
 - (iii) when carried by a lock-out submersible or atmospheric diving system, sufficient to meet the needs of the occupants of the submersible or system for a minimum of 48 hours. O. Reg. 629/94, s. 27.

BREATHING MIXTURES CONTAINING NITROGEN

- 28.** Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that, when nitrogen is a component of any breathing mixture used in the diving operation, the mixture is not used at depths where the nitrogen partial pressure in the breathing mixture exceeds 4.8 bars. O. Reg. 629/94, s. 28.

PURITY OF BREATHING MIXTURES

- 29.** Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that the purity of any breathing mixture used in the diving operation conforms to the Canadian Standards Association Standard, Z275.2-92, "Occupational Safety Code for Diving Operations". O. Reg. 629/94, s. 29.

COMPRESSOR REQUIREMENTS

- 30.** (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that,
- (a) any compressor and associated equipment used in the diving operation to supply a breathing mixture conforms to the requirements of the Canadian Standards Association Standard Z275.1-93, "Hyperbaric Facilities" and the Canadian Standards Association Standard B-51, "Code for the Construction and Inspection of Boilers and Pressure Vessels";
 - (b) any compressor used in the diving operation to supply a breathing mixture directly to a diver,

- (i) is capable of maintaining a supply of breathing mixture at least equal to double the volume of breathing mixture required by the diver, at a pressure at least 25 per cent greater than the maximum pressure required to supply the breathing mixture to the diver, and
 - (ii) operates automatically and without undue fluctuation of pressure in the receiver;
 - (c) any compressor used in the diving operation to supply a breathing mixture directly to a diver discharges the mixture through purification filters and into a receiver of adequate volume; and
 - (d) any compressor and associated equipment used in the diving operation is operated by a competent person, who may be the diver's tender.
- (2) The operator of a compressor shall ensure that the compressor and associated equipment, including valves, stop valves, drain-cocks, gauges and filters, are operating adequately throughout the dive. O. Reg. 629/94, s. 30.

OXYGEN SUPPLY SYSTEMS

31. (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any oxygen supply system used in the diving operation,

- (a) is designed specifically to supply oxygen;
- (b) is adequate having regard to the circumstances of the diving operation;
- (c) is designed so that the possibility of contamination of the oxygen by hazardous elements, including other gases, is minimized;
- (d) is designed so that the possibility of contamination of other breathing mixtures being used in the diving operation by oxygen is minimized;
- (e) does not include quick-opening valves, such as ball valves, except for emergency shut-off;
- (f) is adequately clean; and
- (g) is designed so that it will not deliver oxygen at a pressure greater than 150 pounds per square inch above the pressure of the maximum diving depth.

(2) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any area where oxygen is stored is,

- (a) adequately ventilated;
- (b) adequately posted with warning signs;
- (c) equipped with an adequate fire extinguishing apparatus;
- (d) adequately maintained; and
- (e) located as far as practicable from combustible materials. O. Reg. 629/94, s. 31.

PART V MEDICAL PROCEDURES

MEDICAL EXAMINATIONS

32. (1) No person shall dive, other than as an atmospheric diving system operator, unless he or she,

- (a) has undergone a medical examination to determine fitness to dive during the 24-month period preceding the dive or during such shorter period preceding the dive as has been recommended by the person's examining physician; and
- (b) has obtained a written statement from the examining physician who performed the most recent examination under clause (a), indicating whether the diver is fit to dive or fit to dive with limitations.

(2) An examination under subsection (1) shall be performed by a physician who is knowledgeable in diving and hyperbaric medicine and shall follow the Code for Medical Examination of Divers, dated July 4, 1994, and issued by the Ministry.

(3) No person shall dive as an atmospheric diving system operator unless he or she,

- (a) has undergone a medical examination to determine fitness to operate an atmospheric diving system during the 24-month period preceding the dive or during such shorter period preceding the dive as has been recommended by the person's examining physician; and
- (b) has obtained a written statement from the examining physician that meets the requirements of subsection (4) and that indicates that the diver is fit to operate an atmospheric diving system or fit to operate an atmospheric diving system with limitations.

(4) A written statement under clause (1) (b) or (3) (b) shall include the examining physician's name and address and shall be signed by the physician. O. Reg. 629/94, s. 32.

EMERGENCY TRAINING

33. (1) Each employer associated with a diving operation shall ensure that up-to-date certification in cardio-pulmonary resuscitation and basic first aid is held by,

- (a) each person appointed as diving supervisor for the diving operation;
- (b) each diver participating in the diving operation; and
- (c) whenever the diving operation is being carried out, at least one worker at the dive site in addition to the people mentioned in clauses (a) and (b).

(2) For the purposes of subsection (1), certification may be from St. John Ambulance, Canadian Red Cross Society or an equivalent organization. O. Reg. 629/94, s. 33.

MEDICAL ASSISTANCE

34. Each employer associated with a diving operation shall ensure that arrangements are made with one or more physicians who are knowledgeable in diving and hyperbaric medicine so that any medical advice or support that may be required is available whenever,

- (a) a dive that involves decompression is carried out; or
- (b) a dive to a depth greater than 100 feet is carried out using techniques other than those of atmospheric diving. O. Reg. 629/94, s. 34.

DECOMPRESSION PROCEDURES AND TABLES

35. The diving supervisor for a diving operation shall ensure that dives that involve decompression are carried out in accordance with adequate decompression procedures and tables. O. Reg. 629/94, s. 35.

PART VI S.C.U.B.A. DIVING

PROHIBITIONS ON S.C.U.B.A. USE

36. (1) The diving supervisor for a diving operation shall ensure that S.C.U.B.A. is not used by,

- (a) a diver working near or in an operating underwater intake;
- (b) a diver working near or in a pipe, tunnel, duct or other confined space;
- (c) a diver working at a water control structure;
- (d) a diver using any power tool, hoisting device, explosive, burning equipment or welding equipment;
- (e) a diver placing any materials underwater in a way that poses a risk to the health or safety of the diver;
- (f) a diver operating at depths in excess of 100 feet; or
- (g) a diver working in a diving operation to which Part XI applies.

(2) For the purposes of clauses (1) (a) and (b), a diver works near a thing where the proximity of the thing to the diver poses a health or safety risk to the diver. O. Reg. 629/94, s. 36.

MINIMUM CREW

37. (1) Whenever S.C.U.B.A. is used, each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that,

- (a) an adequate number of diver's tenders, and in any event at least one diver's tender, is present at the dive site;
- (b) an adequate number of standby divers, and in any event at least one standby diver, is present at the dive site;
- (c) an adequate number of divers, and in any event at least one diver, is present at the dive site; and
- (d) one person does not act at the same time both as diver's tender and as standby diver for one or more divers.

(2) Whenever S.C.U.B.A. is used, the diving supervisor may also function either as a standby diver or as a diver's tender. O. Reg. 629/94, s. 37.

S.C.U.B.A. DIVING EQUIPMENT

38. (1) A diver using open circuit S.C.U.B.A. in a diving operation and the diving supervisor for the diving operation shall ensure that the open circuit S.C.U.B.A. is equipped with,

- (a) a demand regulator;
 - (b) a tank with a quick release harness; and
 - (c) an emergency reserve system or emergency bail-out system.
- (2) A diver using S.C.U.B.A. in a diving operation and the diving supervisor for the diving operation shall ensure that the diver is equipped with,
- (a) an adequate face mask;
 - (b) an adequate pair of fins;
 - (c) an adequate submersible pressure gauge; and
 - (d) where the S.C.U.B.A. is to be used during hours of darkness, an adequate locator device, such as a rescue beacon or strobe. O. Reg. 629/94, s. 38.

**PART VII
SURFACE-SUPPLIED DIVING**

MINIMUM CREW

- 39.** (1) Whenever surface-supplied diving is being carried out, each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that,
- (a) an adequate number of diver's tenders, and in any event at least one diver's tender, is present at the dive site;
 - (b) an adequate number of standby divers, and in any event at least one standby diver, is present at the dive site;
 - (c) an adequate number of divers, and in any event at least one diver, is present at the dive site;
 - (d) except in a health or safety emergency, there is a separate diver's tender for each diver engaged in surface-supplied diving; and
 - (e) one person does not act at the same time both as a diver's tender and as a standby diver for one or more divers engaged in surface-supplied diving.
- (2) For the purposes of subsection (1), the diving supervisor may also function either as a standby diver or as a diver's tender.
- (3) Whenever a hyperbaric chamber is required by subsection 23 (1) or (3) and surface-supplied diving is being carried out, each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that,
- (a) the requirements of subsection (1) are met; and
 - (b) a competent worker who does not have any duties that would interfere with his or her adequate operation of the chamber is available to operate the chamber.
- (4) For the purposes of subsection (3), the diving supervisor may also function as one of the following:
1. A standby diver.
 2. A diver's tender.
 3. A chamber operator.
- (5) Whenever surface supplied diving is carried out in a diving operation to which Part XI applies, each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that,
- (a) the requirements of subsection (1) or (3), as the case may be, are met; and
 - (b) the diving supervisor does not have any duties other than the duties of a diving supervisor. O. Reg. 629/94, s. 39.

BREATHING MIXTURE SUPPLY LINES

- 40.** (1) The diving supervisor for a diving operation shall ensure that any breathing mixture supply line used in surface-supplied diving,
- (a) is adequate;
 - (b) has an internal diameter sufficient to permit adequate flow rates and pressures;
 - (c) is protected in a way that ensures against damage at the dive site; and
 - (d) is protected against kinking.
- (2) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that each breathing mixture supply line used in surface-supplied diving is fitted with an adequate breathing mixture supply valve.

(3) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that the breathing mixture supply valve of any diver engaged in surface-supplied diving is,

- (a) readily accessible to dive site personnel;
- (b) protected in a way that ensures against damage at the dive site;
- (c) clearly marked to permit dive site personnel to identify the diver whose breathing mixture supply it controls; and
- (d) under the care and control of a competent person.

(4) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that each breathing mixture supply line used in surface-supplied diving is fitted with an adequate pressure gauge installed,

- (a) downstream of the diver's supply valve, except where the diver's supply valve is a position indicating valve; and
- (b) in a way that permits dive site personnel a clear and unobstructed view of its dial and figures. O. Reg. 629/94, s. 40.

HELMETS, MASKS AND HOOKAH

41. (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any diver engaged in surface-supplied diving wears a diving helmet or full face mask or uses a hookah that meets the requirements of subsections (2) to (4).

(2) A helmet, face mask or hookah must be,

- (a) adequate;
- (b) fitted with an adequate non-return valve; and
- (c) attached by a hose to an adequate emergency bail-out system that is,
 - (i) worn by the diver, and
 - (ii) not used for suit-inflation.

(3) A helmet or mask shall be fitted with an adequate locking or fastening device.

(4) A helmet shall be fitted with an adequate and compatible attachment system for securing and sealing the helmet in place. O. Reg. 629/94, s. 41.

PART VIII DEEP DIVING

GENERAL REQUIREMENTS

42. (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any diver engaged in deep diving, other than atmospheric diving, is provided with an adequate breathing mixture that is mixed gas.

(2) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that deep diving is not carried out unless,

- (a) an adequate stage, downline, structure or other means is available to enable the diver to maintain the decompression stop depths and times specified in the decompression tables used for the dive without undue exertion and movement; and
- (b) the diving supervisor has a means of,
 - (i) monitoring the depth of each diver,
 - (ii) controlling the pressures at which breathing mixtures are being supplied to each diver, and
 - (iii) analyzing the breathing mixtures being supplied to each diver.

(3) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that a submersible compression chamber that meets the requirements of Part IX is used to transfer personnel under pressure greater than one atmosphere to and from the underwater work site during any dive where,

- (a) bottom time exceeds 30 minutes and depth is greater than 165 feet;
- (b) bottom time exceeds 25 minutes and depth is greater than 195 feet; or
- (c) depth exceeds 230 feet. O. Reg. 629/94, s. 42.

EXPOSURE LIMITS AND REST PERIODS

43. (1) The diving supervisor for a diving operation shall ensure that a diver who has engaged in deep diving using non-saturation diving techniques does not work at a pressure greater than one atmosphere during the 24-hour period immediately following completion of decompression.

(2) The diving supervisor for a diving operation shall ensure that a diver who has engaged in deep diving using saturation diving techniques does not work at a pressure greater than one atmosphere during the 14-day period immediately following completion of decompression, except as permitted by a physician who is knowledgeable in diving and hyperbaric medicine.

(3) The diving supervisor for a diving operation shall ensure that a diver who has engaged in deep diving using saturation diving techniques observes the following limits:

1. In the case of a dive to a depth of 500 feet or less using a submersible compression chamber, no diver shall spend, seal to seal,
 - i. more than four hours in the water, or
 - ii. more than 10 hours in the submersible compression chamber.
2. In the case of a dive to a depth greater than 500 feet using a submersible compression chamber, no diver shall spend, seal to seal,
 - i. more than three hours in the water, or
 - ii. more than eight hours in the chamber.
3. A diver shall not work for at least 12 continuous hours immediately after reaching a limit set out in subparagraph i or ii of paragraph 1 or subparagraph i or ii of paragraph 2 and, in any event, a diver shall not work for at least 12 continuous hours in any 24-hour period. O. Reg. 629/94, s. 43.

PART IX SUBMERSIBLE COMPRESSION CHAMBERS, SATURATION CHAMBERS AND ATMOSPHERIC DIVING SYSTEMS

SUBMERSIBLE COMPRESSION CHAMBER CONSTRUCTION AND EQUIPMENT

44. Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any submersible compression chamber used in the diving operation,

- (a) conforms to and is operated in accordance with the requirements specified in clauses 1 to 9 and 13 of the Canadian Standards Association Standard, Z275.1-93, "Hyperbaric Facilities";
- (b) is capable of mating to a hyperbaric chamber that conforms to the requirements specified in clauses 1 to 9 and, in the case of saturation diving, clause 12 of the Canadian Standards Association Standard, Z275.1-93, "Hyperbaric Facilities";
- (c) is adequately equipped to permit the transfer of persons under pressure into and out of a hyperbaric chamber;
- (d) is of adequate size and design to accommodate the number of occupants that it is to carry during the diving operation without overcrowding;
- (e) is designed in a way that permits divers to enter and exit with ease;
- (f) is designed to permit a diver to disconnect or shear the umbilical bundle of the chamber in the event of a health or safety emergency;
- (g) is provided with an adequate mechanism for shedding ballast weights that,
 - (i) can be operated from within the chamber, and
 - (ii) is designed in a way that ensures against accidental shedding of the weights;
- (h) is equipped with,
 - (i) adequate doors and hatches that act as pressure seals and that may be opened from either side,
 - (ii) adequate valves, gauges and other fittings to control pressure within the chamber and to clearly indicate internal and external pressures,
 - (iii) adequate pressurization valves and main exhaust valves that are spring-loaded so as to close when not held in the open position,
 - (iv) adequate primary lighting equipment and emergency back-up lighting equipment,
 - (v) adequate first aid equipment,
 - (vi) adequate hoisting equipment to recover an unconscious or injured diver into the chamber,

- (vii) adequate heating equipment,
 - (viii) adequate emergency thermal protection for all occupants,
 - (ix) an adequate emergency stroboscope light,
 - (x) an adequate emergency locating device,
 - (xi) adequate instruments to monitor temperature, oxygen and carbon dioxide levels within the chamber,
 - (xii) adequate primary and emergency carbon dioxide scrubbers,
 - (xiii) adequate hull shut-off valves on all gas and water penetrations into the chamber,
 - (xiv) a secondary lifting eye or similar device that is at least as strong as the primary lifting eye,
 - (xv) a blind port, and
 - (xvi) an adequate tool kit;
- (i) is designed in a way that ensures against inadvertent operation of the secondary breathing mixture supply system; and
- (j) is designed in a way that permits the secondary breathing mixture supply to be brought on-line from within the chamber. O. Reg. 629/94, s. 44.

SATURATION CHAMBER CONSTRUCTION AND EQUIPMENT

45. Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any saturation chamber used in the diving operation conforms to and is operated in accordance with the requirements specified in clauses 1 to 9 and 12 of the Canadian Standards Association Standard, Z275.1-93, "Hyperbaric Facilities". O. Reg. 629/94, s. 45.

ATMOSPHERIC DIVING SYSTEM CONSTRUCTION AND EQUIPMENT

46. (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any atmospheric diving system used in the diving operation,

- (a) is designed to permit a diver to disconnect or shear the umbilical bundle of the system in the event of a health or safety emergency;
- (b) is provided with an adequate mechanism for shedding ballast weights that,
 - (i) can be operated from within the system, and
 - (ii) is designed in a way that ensures against accidental shedding of the weights;
- (c) is designed in a way that ensures against inadvertent operation of the secondary breathing mixture supply system;
- (d) is designed in a way that permits the secondary breathing mixture supply to be brought on-line from within the system;
- (e) is equipped with the things mentioned in subclauses 44 (h) (i), (ii), (iv), (v) and (vii) to (xvi); and
- (f) conforms to the requirements for registration set out in,
 - (i) Det Norske Veritas, "Rules For Certification of Diving Systems", 1988,
 - (ii) Lloyd's Register, "Rules and Regulations For the Construction and Classification of Submersibles and Underwater Systems", 1989, Notice No. 1, July 17, 1991, or
 - (iii) American Bureau of Shipping, "Rules For Building and Classing Underwater Vehicles, Systems and Hyperbaric Facilities", 1990.

(2) For the purposes of clause (1) (e), a reference in clause 44 (h) to "chamber" shall be deemed to be a reference to "system". O. Reg. 629/94, s. 46.

LOCK-OUT SUBMERSIBLE CONSTRUCTION AND EQUIPMENT

47. (1) The submersible compression chamber part of a lock-out submersible and the atmospheric diving system part of the lock-out submersible may have in common the weight-shedding mechanism required for submersible compression chambers by clause 44 (g) and for atmospheric diving systems by clause 46 (1) (b), so long as the mechanism can be operated from within the atmospheric diving system.

(2) The submersible compression chamber part of a lock-out submersible and the atmospheric diving system part of the lock-out submersible may have in common,

- (a) the stroboscope required for submersible compression chambers by subclause 44 (h) (ix) and for atmospheric diving systems by clause 46 (1) (e); and

(b) the locating device required for submersible compression chambers by subclause 44 (h) (x) and for atmospheric diving systems by clause 46 (1) (e).

(3) Where a submersible compression chamber and atmospheric diving system together form a lock-out submersible, each employer associated with a diving operation and the diving supervisor for a diving operation need not comply with clause 44 (f) or 46 (1) (a), if the lock-out submersible as a whole is designed to permit a diver to disconnect or shear the umbilical bundle of the lock-out submersible in the event of a health or safety emergency.

(4) Where a submersible compression chamber and atmospheric diving system together form a lock-out submersible, each employer associated with a diving operation and the diving supervisor for a diving operation need not comply with subclause 44 (h) (xiv) or with the requirement in clause 46 (1) (e) relating to secondary lifting eyes or similar devices, if the lock-out submersible as a whole has a secondary lifting eye or similar device that is at least as strong as the primary lifting eye of the lock-out submersible. O. Reg. 629/94, s. 47.

WHEN SUBMERSIBLE COMPRESSION CHAMBER ATTENDANT REQUIRED

48. Except in the event of a health or safety emergency, the diving supervisor for a diving operation shall ensure that any diver who exits from a submersible compression chamber is attended continuously by a submersible compression chamber attendant until the diver re-enters the chamber. O. Reg. 629/94, s. 48.

UNDERWATER EXIT FROM SUBMERSIBLE COMPRESSION CHAMBER

49. (1) The diving supervisor for a diving operation shall ensure that any diver, other than a submersible compression chamber attendant, who exits underwater from a submersible compression chamber is equipped with an umbilical bundle that is no longer than 100 feet.

(2) The diving supervisor for a diving operation shall ensure that any submersible compression chamber attendant who exits underwater from a submersible compression chamber is equipped with an umbilical bundle that meets the requirements of clause 12 (6) (e).

(3) The diving supervisor for a diving operation shall ensure that no diver exits underwater from the submersible compression chamber of a lock-out submersible unless,

- (a) the lock-out submersible is negatively buoyant on the bottom or adequately secured to the underwater work site; and
- (b) the diving supervisor is in the one atmosphere chamber of the lock-out submersible. O. Reg. 629/94, s. 49.

BREATHING MIXTURES FOR ATMOSPHERIC DIVING

50. Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that any diver engaged in atmospheric diving is provided with an adequate breathing mixture that has the same proportions of gases as are found in air. O. Reg. 629/94, s. 50.

BACK-UP ATMOSPHERIC DIVING SYSTEM

51. Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that, whenever an atmospheric diving system is used to carry out the diving operation, a back-up atmospheric diving system with adequate depth capability is available and can be deployed quickly enough to effect a rescue within 48 hours of an emergency arising. O. Reg. 629/94, s. 51.

MINIMUM CREW

52. (1) Whenever a submersible compression chamber or an atmospheric diving system is used to carry out a diving operation, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that an adequate number of workers is present at the dive site and in the chamber or system.

(2) Whenever a submersible compression chamber is used to carry out non-saturation diving, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that there are at least two workers, not including the diving supervisor and any divers, available at the dive site to assist,

- (a) in the launch and recovery of the submersible compression chamber; and
- (b) in the operation of the hyperbaric chamber.

(3) Whenever a submersible compression chamber is used to carry out saturation diving, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that there are at least three workers, not including the diving supervisor and any divers, available at the dive site to assist,

- (a) in the launch and recovery of the submersible compression chamber;
- (b) in the operation of the hyperbaric chamber; and
- (c) in the operation of the life-support systems.

(4) Whenever a submersible compression chamber or an atmospheric diving system is used to carry out a diving operation, each employer associated with the diving operation and the diving supervisor for the diving operation shall ensure that at

least one of the workers at the dive site is available to render any in-water assistance in the launch or recovery of the chamber or system that may be needed in the event of a health or safety emergency. O. Reg. 629/94, s. 52.

PART X SPECIAL HAZARDS

LIVEBOATING

53. (1) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that liveboating is not conducted,

- (a) after sunset and before sunrise;
- (b) in sea-state that poses a risk to the health or safety of a diver; or
- (c) from vessels with manoeuvrability that is not adequate.

(2) The diving supervisor for a diving operation shall not permit in-water decompression procedures to be used in conjunction with liveboating.

(3) Each employer associated with a diving operation and the diving supervisor for a diving operation shall ensure that, whenever a diver participates in liveboating, a procedure or device that ensures against the diver's umbilical bundle becoming entangled in the propellers is employed.

(4) The diving supervisor for a diving operation shall ensure that any diver's tender participating in liveboating has a continuous unobstructed view of the vessel's captain.

(5) Each employer associated with a diving operation shall ensure that any boat captain participating in liveboating is competent to perform the duties of boat captain during liveboating.

(6) The boat captain and the diving supervisor for a diving operation shall co-operate in carrying out their responsibilities as needed to protect the health and safety of the divers. O. Reg. 629/94, s. 53.

WATER FLOW HAZARDS

54. (1) The diving supervisor for a diving operation shall ensure that diving is not conducted in hazardous water flow conditions.

(2) Each employer and each owner associated with a diving operation and the diving supervisor for the diving operation shall ensure that, before any dive is begun, any water flow that is a potential hazard to a diver,

- (a) is identified and described to the diver; and
- (b) is locked-out or controlled in a manner that,
 - (i) is satisfactory to the diver and diving supervisor, and
 - (ii) ensures that the water flow poses no safety hazard to the diver.

(3) In complying with subsection (2), each employer and each owner associated with a diving operation and the diving supervisor for the diving operation shall take account of water flow hazards that tend to arise when a diver works,

- (a) near or in an operating underwater intake;
- (b) near or in a pipe, tunnel, duct or other confined space; or
- (c) at a water control structure. O. Reg. 629/94, s. 54.

UNDERWATER MECHANISMS

55. Each employer and each owner associated with a diving operation and the diving supervisor for a diving operation shall ensure that, before any dive is begun, any mechanism that is a potential hazard to a diver,

- (a) is identified and described to the diver; and
- (b) is locked-out in a manner that is,
 - (i) satisfactory to the diver and diving supervisor, and
 - (ii) adequate to protect the health and safety of the diver. O. Reg. 629/94, s. 55.

USE OF EXPLOSIVES

56. Each employer associated with a diving operation and the diving supervisor for the diving operation shall ensure that,

- (a) any transportation, handling, storage or use of explosives is carried out in a manner that does not endanger any worker;
- (b) any initiation of explosives is subject to the direct control of the diving supervisor;

- (c) the blasting initiator and its operating key or operating mechanism are kept physically separated from each other until initiation of the explosive is to take place; and
- (d) no diver is in the water when an underwater explosive is initiated. O. Reg. 629/94, s. 56.

PART XI CONTAMINATED ENVIRONMENTS

DEFINITION

57. In this Part,

“contaminant” has the same meaning as in the *Environmental Protection Act*. O. Reg. 629/94, s. 57.

APPLICATION

58. This Part applies to,

- (a) any diving operation that poses a significant risk to the health or safety of a worker because it is carried out at or near the point of discharge of effluent from an industrial plant, sewage treatment plant or water treatment plant;
- (b) any diving operation that poses a significant risk to the health or safety of a worker because the purpose of the operation is to clean up or contain a contaminant; and
- (c) any diving operation that poses a significant risk to the health or safety of a worker because it is carried out at or near the site of a spill within the meaning of Part X of the *Environmental Protection Act*. O. Reg. 629/94, s. 58.

IDENTIFICATION AND PRECAUTIONS

59. (1) Each constructor of a project where a diving operation is to take place, each employer associated with a diving operation, each owner associated with a diving operation and the diving supervisor for a diving operation shall ensure that, before any dive is begun, a competent person identifies each contaminant that is or is likely to be present during the diving operation, at or near the dive site or underwater work site, at a concentration that would pose a significant risk to the health or safety of a worker.

(2) Each constructor of a project where a diving operation is to take place, each employer associated with a diving operation and each owner associated with a diving operation shall ensure that a written contaminant management plan is prepared, with input from one or more of the diving supervisors appointed for the diving operation under section 6.

(3) A contaminant management plan shall,

- (a) name the contaminants identified under subsection (1);
 - (b) describe the potential known health or safety risks that the contaminants identified under subsection (1) pose to humans;
 - (c) describe the equipment and apparel required to be used by section 60;
 - (d) specify the location of the exclusion zone, contaminated reduction zone and support zone required by section 62;
 - (e) outline the procedures to be followed by personnel in moving from one zone to another;
 - (f) describe the special emergency measures associated with exposure to the contaminants identified under subsection (1), where appropriate; and
 - (g) outline procedures for obtaining, within an adequately short time, information relating to,
 - (i) the handling of the contaminants identified under subsection (1), and
 - (ii) the administering of any emergency treatment that may become necessary as a result of exposure to a contaminant identified under subsection (1).
- (4) The diving supervisor for the diving operation shall ensure that a copy of the plan is prominently posted at the dive site. O. Reg. 629/94, s. 59.

EQUIPMENT — GENERAL

60. (1) Each employer associated with a diving operation and the diving supervisor for the diving operation shall ensure that,

- (a) adequate precautions are taken to ensure that the breathing mixture supply used is not adversely affected by a contaminant identified under subsection 59 (1);
- (b) adequate breathing equipment for surface support personnel is provided if there is a risk to their health or safety from inhaling a contaminant identified under subsection 59 (1) during the diving operation;
- (c) adequate apparel and equipment is worn to prevent exposing surface support personnel to a contaminant identified under subsection 59 (1);

- (d) an adequate means of decontaminating personnel exposed to a contaminant identified under subsection 59 (1) is provided at the dive site;
 - (e) diving equipment used in the diving operation is not used in any subsequent diving operation unless it is free of all contaminants identified under subsection 59 (1); and
 - (f) diving equipment that is not for reuse is adequately disposed of.
- (2) The diving supervisor for the diving operation shall ensure that,
- (a) diving equipment that has been or may have been exposed to a contaminant identified under subsection 59 (1) is examined before each dive to ensure that it has not deteriorated in a way that would result, if it were used in the dive, in a worker being exposed to a contaminant identified under subsection 59 (1); and
 - (b) diving equipment that has been or may have been exposed to a contaminant identified under subsection 59 (1) is not removed from the dive site except as authorized by a competent person. O. Reg. 629/94, s. 60.

SURFACE-SUPPLIED DIVING

- 61.** Each employer associated with a diving operation and the diving supervisor for the diving operation shall ensure that a diver engaged in surface-supplied diving wears, in addition to the equipment required by section 41,
- (a) an adequate diving helmet designed to protect divers from exposure to contaminants; and
 - (b) an adequate, totally enclosed diving suit that mates to the helmet with a positive seal and locking device and that does not permit contact between the contaminated environment and the diver. O. Reg. 629/94, s. 61.

WORK ZONES

- 62.** (1) Each employer associated with a diving operation and the diving supervisor for the diving operation shall ensure that the dive site has a clearly marked contamination reduction zone that is adequately designed and equipped to permit,
- (a) personnel who have been or may have been exposed to a contaminant identified under subsection 59 (1) to dress and undress; and
 - (b) equipment and personnel that have been or may have been exposed to a contaminant identified under subsection 59 (1) to be cleaned.
- (2) Each employer associated with a diving operation and the diving supervisor for the diving operation shall ensure that the dive site has a clearly marked support zone that is adequately designed and equipped to permit the further cleaning or the disposal of equipment that has been or may have been exposed to a contaminant identified under subsection 59 (1).
- (3) Each employer associated with a diving operation and the diving supervisor for the diving operation shall ensure that the dive site has a clearly marked exclusion zone that is adequately designed and equipped for the purpose set out in subsection (4).
- (4) Each employer associated with a diving operation and the diving supervisor for the diving operation shall ensure that all handling of contaminants identified under subsection 59 (1) that occurs at the dive site and that is not of a sort described in subsection (2) or (3) shall occur in the exclusion zone.
- (5) The diving supervisor for the diving operation shall ensure that,
- (a) no person enters the exclusion zone unless he or she is wearing adequate personal protective equipment;
 - (b) personnel enter and leave the exclusion zone only through the contamination reduction zone or the support zone;
 - (c) no person cleans contaminated equipment in the contamination reduction zone or the support zone unless he or she is wearing adequate personal protective clothing;
 - (d) no food, drink or tobacco is taken into, left or consumed in the contamination reduction zone, the support zone or the exclusion zone; and
 - (e) no person enters the contamination reduction zone, the support zone or the exclusion zone without the authorization of the diving supervisor. O. Reg. 629/94, s. 62.

PART XII DIVING RECORDS

DIVER'S LOGBOOK

- 63.** (1) No person shall dive in a diving operation unless he or she has a diving log book that,
- (a) is permanently bound;
 - (b) has numbered pages;
 - (c) contains the diver's signature and photograph;

- (d) has attached to it or entered into it a record of any qualifications obtained by the diver that relate to diving; and
 - (e) has attached to it or entered into it a record of the certification referred to in section 33.
- (2) Each person who dives in a diving operation shall make an entry, in accordance with subsections (4) to (7), in the diving log book in respect of each dive, each medical recompression and each hyperbaric exposure carried out or undergone by the person in connection with the diving operation.
- (3) No person shall dive in a diving operation unless he or she has made an entry, in accordance with subsections (6) and (7), in the diving log book in respect of any dive of a type described in clause 2 (2) (a), (c) or (d) that the person carried out during the 48 hours preceding the dive that is part of a diving operation.
- (4) Entries under subsection (2) shall be made within 48 hours of the dive, medical recompression or hyperbaric exposure and shall appear in the log book in chronological order.
- (5) An entry under subsection (2) in respect of a dive shall be signed by the diving supervisor and an entry under subsection (2) in respect of a medical recompression or a hyperbaric exposure shall be signed by the diving supervisor or presiding physician.
- (6) An entry under subsection (2) or (3) in respect of a dive shall state,
- (a) the type of diving equipment used;
 - (b) the breathing mixture used;
 - (c) the time the diver left the surface;
 - (d) the maximum depth attained;
 - (e) the time the diver left the bottom;
 - (f) the time the diver reached the surface;
 - (g) the time of the surface interval, if a repetitive dive was undertaken;
 - (h) the decompression table used;
 - (i) the date;
 - (j) any unusual incidents; and
 - (k) the environmental conditions.
- (7) In addition, an entry under subsection (2) or (3) in respect of a dive originating from a submersible compression chamber or other submerged base shall state,
- (a) the depth at the base;
 - (b) the maximum and minimum depths attained; and
 - (c) the duration of the excursions from the base.
- (8) A person who is required to have a diving log book shall retain the log book for five years after the date of the last entry in it. O. Reg. 629/94, s. 63.

DAILY RECORD

- 64.** (1) The diving supervisor for a diving operation shall make a record in accordance with subsections (2) to (4) in respect of each day of the diving operation.
- (2) A daily record shall include an entry in respect of each dive undertaken during the day, stating,
- (a) the type of diving equipment used;
 - (b) whether a hyperbaric chamber was used;
 - (c) the breathing mixture used;
 - (d) the time the diver left the surface;
 - (e) the maximum depth attained;
 - (f) the time the diver left the bottom;
 - (g) the time the diver reached the surface;
 - (h) the time of the surface interval, if a repetitive dive was undertaken;
 - (i) the decompression table used;
 - (j) the name of the diver;

- (k) the name of the tenders;
- (l) the name of the standby diver;
- (m) any unusual incidents;
- (n) the location of the dive site;
- (o) the environmental conditions;
- (p) the purpose of the dive; and
- (q) any underwater work site hazards.

(3) A daily record shall also include,

- (a) a record of equipment examinations, tests and repairs performed during the day under clause 12 (3) (f);
- (b) a record of hoisting device maintenance and examinations performed during the day under subsection 20 (5);
- (c) a record of oxygen supply system cleaning performed during the day under clause 31 (1) (f);
- (d) any arrangements for medical advice or support made under section 34 in respect of the day;
- (e) a description of any diving vessel used during the day;
- (f) a record of any disposal of equipment undertaken during the day under clause 60 (1) (f);
- (g) the name of any client on whose behalf the diving operation is being carried out on the day; and
- (h) a general description of the purpose of the diving operation on the day.

(4) A daily record shall state the date in respect of which it is made and shall include the name and signature of the diving supervisor.

(5) A diving supervisor who makes a daily record under this section shall file the record with his or her employer within a reasonable time.

(6) An employer with whom a daily record is filed shall retain the record for a period of five years from the day in respect of which it is made, together with the attachments described in subsection (7).

(7) An employer shall attach to the daily record a copy of any notice relating to the day that was given under section 10 or 11. O. Reg. 629/94, s. 64.

65. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 629/94, s. 65.

66. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 629/94, s. 66.

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