



Offshore Regulatory Module

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Why a Regulatory Module?

The DCBC Offshore Supervisor Certification Scheme is aligned with the supervisor certification schemes of the Australian Diver Accreditation Scheme (ADAS) and the International Marine Contractors Association (IMCA). Each scheme requires that supervisors demonstrate a knowledge of the diving regulations in the area in which they are going to supervise; e.g. Norwegian Sector of the North Sea; United Kingdom Sector of the North Sea; or the Australian offshore. Likewise, supervisors in the Canadian offshore must demonstrate a knowledge of Canadian regulations.

Diving Safety Specialists (DSS) are a unique Canadian requirement for diving operations in the Canadian offshore. Candidates for DSS must have five (5) years' experience as an offshore supervisor and therefore will have demonstrated his/her technical knowledge in the writing of the offshore supervisor's examination. In addition to demonstrating technical knowledge the candidate must also demonstrate an adequate knowledge of the regulatory aspects of diving operations.

Thus the purpose of this regulatory module is to allow candidates for certification as Offshore Supervisor or Offshore DSS a way to demonstrate knowledge of Canadian diving regulations.

The Offshore Supervisor

The term 'diving supervisor' refers to a person who has relevant experience and certification and who has been formally appointed by his company. For operations in Canadian waters under the jurisdiction of the Canada Nova Scotia Offshore Petroleum board or the Canada Newfoundland and Labrador Offshore Petroleum board supervisors are required to be certified by DCBC as competent to undertake supervision of the relevant diving operation.

Both offshore air and bell diving are covered. A supervisor who is qualified to take charge of an air operation only is not qualified to take charge of a bell operation. A bell diving supervisor may be qualified to take charge of both operations, depending on his previous experience and provided that his company is satisfied as to his competence.

Responsibilities

- ◆ The supervisor's responsibilities are both legally defined in regulations and laid down in company procedures. In the event of any conflict between Canada's diving regulations and company procedures, the diving regulations must take precedence. Diving supervisors are advised to clarify any such anomalies before the diving operation starts.
- ◆ Generally speaking, the responsibilities of a diving supervisor are to:
 - ensure the safety of the diving team and any other persons who may be engaged in the operation;
 - complete the work to the satisfaction of the clients.

Supervisor duties may be summarised as follows:

- ◆ □to ensure that the diving operation is carried out in accordance with regulations and procedures, that all plant and equipment and suitable facilities (including emergency

facilities) necessary for the safe conduct of the operation are available and properly maintained and certified;

- ◆ to ensure that the diving operation is carried out from a suitable and safe place; that the diving team consists of an appropriate number of suitably qualified personnel who are all medically fit (this includes being free from the influence of drugs and alcohol) and to take all reasonable precautions to ensure the safety of those engaged in the diving operation;
- ◆ ☐to ensure that the members of the diving team are aware of the company's diving rules; that the divers' medical certificates are in order; and that all equipment is checked before the start of a diving operation in accordance with specific national regulations;
- ◆ to consult with the master of the vessel or installation manager about the conduct of the diving operation, maintain the diving operation logbook and sign divers' logbooks;
- ◆ ☐to be present and in control while there is a diver in the water or under pressure and to report any accident or incident which led, or might have led, to serious injury.

The Offshore Diving Safety Specialist (DSS)

A person who has been engaged as a diving safety specialist for a diving program by an operator, pursuant to paragraph 6(1)(a) of the Canada Oil and Gas Diving Regulations, shall

(a) advise the operator on all safety aspects of the diving program including

(i) the application for authorization, under paragraph 3.2(1)(b) of the Act, for the diving program,

(ii) any application made by the operator for authorization pursuant to subsection 12.2(1) of the Act, and

(iii) any decision by the operator to interrupt or discontinue the diving program or any portion of the diving program for safety reasons; and

(b) be available on a 24 hour a day basis to advise any person involved in the diving program, including persons making decisions affecting the safety of divers involved in the diving program, on the safety aspects of the diving program.

A person who has been engaged as a diving safety specialist for a diving operation by a diving contractor, pursuant to subsection 9(1) of the regulations, shall

(a) advise the diving contractor on all safety aspects of the diving operation; and

(b) be available on a 24 hour a day basis to advise any person involved in the diving operation, including any person making decisions affecting the safety of divers involved in the diving operation, on all safety aspects of the diving operation.

A diving safety specialist referred to above shall, in advising any person pursuant to those subsections, take into account as a primary consideration the safety of any divers involved in the diving program or diving operation, as the case may be.

Canadian offshore diving regulations

There are three sets of regulations which are applicable in offshore diving operations in connection with the exploration or drilling for or the production, conservation, processing or transportation of oil or gas.

Diving regulations are promulgated by the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB), the Canada-Newfoundland and Labrador Offshore Petroleum Board (CNLOPB) and the National Energy Board of Canada (NEB). Because all three sets of regulations are similar this regulatory module includes a copy of the regulations promulgated by the NEB, i.e. "Regulations respecting the safety of diving operations conducted in connection with the exploration or drilling for or the production, conservation, processing or transportation of oil and gas" which may also be cited as the "Canada Oil and Gas Diving Regulations". Candidates for Offshore Supervisor and Diving Safety Specialist should also be familiar with the Newfoundland Offshore Area Petroleum Diving Regulations and the Nova Scotia Offshore Area Petroleum Diving Regulations.

The Canada Oil and Gas Diving Regulations

Regulations Respecting the Safety of Diving Operations Conducted in Connection with the Exploration or Drilling for or the Production, Conservation, Processing or Transportation of Oil or Gas

P.C. 1988-2609 1988-12-07

Whereas a copy of the proposed *Regulations respecting the safety of diving operations conducted in connection with the exploration or drilling for or the production, conservation, processing or transportation of oil or gas*, substantially in the form annexed hereto, was published in the [Canada Gazette](#) Part I on July 9, 1988 and a reasonable opportunity was thereby afforded to interested persons to make representations to the Minister of Energy, Mines and Resources or the Minister of Indian Affairs and Northern Development with respect thereto;

Therefore, Her Excellency the Governor General in Council, on the recommendation of the Minister of Energy, Mines and Resources and the Minister of Indian Affairs and Northern Development, pursuant to sections 12^{Footnote} and 57 of the *Oil and Gas Production and Conservation Act*, is pleased hereby to make the annexed *Regulations respecting the safety of diving operations conducted in connection with the exploration or drilling for or the production, conservation, processing or transportation of oil and gas*.

[Return to footnote](#) *S.C. 1986, c. 45, s. 122

SHORT TITLE

1. These Regulations may be cited as the [Canada Oil and Gas Diving Regulations](#).

INTERPRETATION

2. In these Regulations,

"acceptable standard"

"acceptable standard" means an applicable standard that is acceptable to the Minister; (*norme acceptable*)

"accident"

"accident" means a fortuitous event that results in the death of or injury to any person involved in a diving operation; (*accident*)

“Act”

“Act” means the *Oil and Gas Production and Conservation Act, (Loi)*

“ADS”

“ADS” means an atmospheric diving system capable of withstanding external pressures greater than atmospheric pressure and in which the internal pressure remains at atmospheric pressure and includes a one-person submarine and the one-atmosphere compartment of a diving submersible; (*système ADS*)

“ADS dive”

“ADS dive” means a dive in which an ADS is used; (*plongée avec système ADS*)

“ADS diving operation”

“ADS diving operation” means a diving operation in which an ADS dive is made; (*opérations de plongée avec système ADS*)

“ADS supervisor”

“ADS supervisor” means a supervisor of a diving operation involving a pilot; (*directeur de plongée avec système ADS*)

“ambient pressure”

“ambient pressure” means the pressure at any given depth; (*pression ambiante*)

“appropriate breathing mixture”

“appropriate breathing mixture” means, in relation to a diving operation, a breathing mixture that is suitable, in terms of composition, temperature and pressure, for the diving plant and equipment used in the diving operation, for the work to be undertaken and for the conditions under which and the depth at which the diving operation is to be conducted; (*mélange respiratoire approprié*)

“attendant”

“attendant” means a person who has been trained in diving procedures and who is acting under the direction of a supervisor; (*adjoind*)

“bell bounce diving technique”

“bell bounce diving technique” means a diving procedure whereby a diving bell or diving submersible is used to transport divers who are under atmospheric pressure or pressures greater than atmospheric pressure to a work site and subsequently to transport the divers under pressures greater than atmospheric pressure from an underwater work site, but does not include saturation diving techniques; (*technique de la plongée d'incursion*)

“bottom time”

“bottom time” means the period commencing when a person begins pressurization or descent for a dive and terminating when the person commences decompression or ascent; (*durée du séjour au fond*)

“breathing mixture”

“breathing mixture” means a mixture of gases used for human respiration and includes pure oxygen and any therapeutic mixture; (*mélange respiratoire*)

“category I dive”

“category I dive” means a dive to a depth of less than 50 m using surface-oriented diving techniques and a breathing mixture of air, but no other breathing mixture except in cases of decompression, treatment or emergency, and includes a dive in which a diving bell or diving submersible is used for an observation dive, but does not include a lock-out dive; (*plongée de catégorie I*)

“category I diving operation”

“category I diving operation” means a diving operation in which a category I dive is made; (*opérations de plongée de catégorie I*)

“category II dive”

“category II dive” means a dive in which a diving bell or diving submersible is used for a lock-out dive to a depth of less than 50 m using a breathing mixture of air, or to a depth of 50 m or more using a breathing mixture of mixed gas other than air, but does not include a saturation dive; (*plongée de catégorie II*)

“category II diving operation”

“category II diving operation” means a diving operation in which a category II dive is made; (*opérations de plongée de catégorie II*)

“category III dive”

“category III dive” means a saturation dive and any dive other than an ADS dive, a category I dive or a category II dive; (*plongée de catégorie III*)

“category III diving operation”

“category III diving operation” means a diving operation in which a category III dive is made; (*opérations de plongée de catégorie III*)

“compression chamber”

“compression chamber” means a pressure vessel that is suitable for human occupancy at internal pressures greater than atmospheric pressure; (*caisson de compression ou compartiment de compression*)

“contingency plan”

“contingency plan” means a contingency plan referred to in paragraph 4(4)(i); (*plan d'urgence*)

“craft”

“craft” means any vessel, vehicle, hovercraft, semi-submersible, submarine or diving-submersible and includes a self-propelled, tethered, towed or bottom-contact apparatus, but does not include an installation; (*véhicule*)

“decompression”

“decompression” means the gradual reduction of the pressures of the inert components of a breathing mixture in the body; (*décompression*)

“decompression sickness”

“decompression sickness” means a condition caused by the reduction or other changes of pressure on or in the body; (*maladie de la décompression*)

“decompression sickness type I”

“decompression sickness type I” means a decompression sickness that is characterized by one or both of the following symptoms, namely,

(a) pain that is located at or near the joints of the limbs but is not felt in other parts of the body, and

(b) cutaneous manifestations including a rash and cutaneous pruritis (intense itching); (*maladie de la décompression de type I*)

“decompression sickness type II”

“decompression sickness type II” means a decompression sickness that is characterized by one or more of the following symptoms, namely,

(a) neurological manifestations related to the central nervous system,

(b) interference with the respiratory or cardiovascular system,

(c) otologic disorders, and

(d) any symptoms not referred to in the definition “decompression sickness type I”; (*maladie de la décompression de type II*)

“decompression table”

“decompression table” means a table or set of tables that

(a) shows a schedule of rates for safe descent and ascent and the appropriate breathing mixture to be used by a diver during a dive, and

(b) has been approved in accordance with section 5; (*table de décompression*)

“dive site”

“dive site” means the place on a craft or installation from which a diving operation is conducted and from which a diver or pilot involved in the diving operation enters the water; (*lieu de plongée*)

“dive time”

“dive time” means the period commencing when a person begins pressurization or descent for a dive and terminating when the person completes decompression or ascent; (*durée de la plongée*)

“diver”

“diver” means a person who meets the requirements of section 53, 55 or 57, who is involved in a diving operation that is part of a diving program and who may be subject to pressures greater than atmospheric pressure; (*plongeur*)

“diving bell”

“diving bell” means a compression chamber that is intended to be submerged and that is designed to transport a person at atmospheric pressure or divers at pressures greater than atmospheric pressure from the surface to an underwater work site and back and includes the compression chamber of a diving submersible; (*tourelle de plongée*)

“diving contractor”

“diving contractor” means a person who employs a diver for a diving operation or who holds a contract to supply diving services for a diving operation, but does not include a self-employed diver; (*entrepreneur en plongée*)

“diving crew”

“diving crew” means the persons who are designated by a diving contractor to be involved in a diving operation conducted by the diving contractor and who are under the supervision of a supervisor; (*équipe de plongée*)

“diving doctor”

“diving doctor” means a medical doctor who is licensed and registered to practise in a province, who has completed a diving medical course acceptable to the Minister and who has been accepted in writing by the Minister to certify divers for the purposes of paragraph 53(b), but who has not been accepted by the Minister to provide medical assistance under pressures greater than atmospheric pressure; (*médecin de plongée*)

“diving operation”

“diving operation” means any work or activity that is associated with a dive and that takes place during the total dive time and includes

- (a) any work or activity involving a diver or pilot,
- (b) the activities of a person assisting a diver or pilot involved in the dive, and
- (c) any use of an ADS in the dive; (*opérations de plongée*)

“diving plant and equipment”

“diving plant and equipment” means the plant and equipment that are used in, or in connection with, a diving operation and includes the plant and equipment that are essential to a diver or pilot; (*matériel de plongée*)

“diving program”

“diving program” means any work or activity related to the exploration or drilling for or the production, conservation, processing or transportation of oil or gas that involves a diving operation; (*programme de plongée ou programme*)

“diving safety specialist”

“diving safety specialist” means a person who meets the criteria set out in subsection 26(1); (*spécialiste de la sécurité en plongée*)

“diving station”

“diving station” means the place from which a diving operation is controlled; (*poste de commande de plongée*)

“diving submersible”

“diving submersible” means a self-propelled submarine that has at least

- (a) one one-atmosphere compartment from which the diving submersible is piloted and from which a dive can be supervised, and

(b) one compression chamber from which a dive can be conducted; (*sous-marin crache-plongeurs*)

“diving supervisor”

“diving supervisor” means a supervisor of a diving operation involving a diver; (*directeur de plongée*)

“dressed-in”

“dressed-in” means fully equipped to dive and ready to enter the water, with the diver’s personal diving equipment tested and at hand, whether or not helmet, face plate or face mask is in place; (*équipé*)

“emergency”

“emergency” means an exceptional situation resulting from an accident or incident; (*urgence*)

“environmental conditions”

“environmental conditions” means conditions that may affect a diving operation and includes

- (a) weather and sea conditions,
- (b) speed of currents and tides,
- (c) shipping activities,
- (d) air and water temperatures,
- (e) icing conditions, and
- (f) debris on the sea surface or sea bed; (*conditions ambiantes*)

“hyperbaric first-aid technician”

“hyperbaric first-aid technician” means a person who has successfully completed an advanced hyperbaric first-aid course acceptable to the Minister; (*secouriste hyperbare*)

“incident”

“incident” means a fortuitous event that compromises or is likely to compromise the safety of, or endangers or is likely to endanger the health, well-being or life of, a person involved in a diving operation; (*incident*)

“installation”

“installation” means any fixed offshore structure used in connection with the exploration or drilling for or the production, conservation, processing or transportation of oil or gas; (*installation*)

“lifeline”

“lifeline” means a safety line attached to a diver that is suitable for recovering and lifting the diver and the diver’s personal diving equipment from the water; (*ligne de vie*)

“life-support system”

“life-support system” means a system comprising the breathing mixture supply systems, decompression and recompression equipment, environmental control systems and equipment and supplies that may be required to provide safe accommodation for a person in the water, in a compression chamber, in a diving bell, in a diving submersible or in an ADS under all pressures and conditions that a person may be exposed to during a diving operation; (*système de survie*)

“life-support technician”

“life-support technician” means a person who has successfully completed a life-support technician’s course acceptable to the Minister and who has satisfied the Minister that the person has attained a level of competence in all aspects of all types of diving techniques, including emergency procedures, hyperbaric first-aid and operation of life-support systems; (*technicien des systèmes de survie*)

“lock-out dive”

“lock-out dive” means a dive from a diving bell or a diving submersible; (*plongée à partir d’un sas*)

“maximum working load”

“maximum working load” means the total weight of a load likely to be handled under normal operating conditions in a diving operation, weighed out of water and includes the weight of the umbilical; (*charge de service maximale*)

“maximum working pressure”

“maximum working pressure” means the maximum pressure to which a compression chamber can safely be exposed under normal operating conditions in a diving operation, and, where a compression chamber is interconnected with one or more other compression chambers, means, in respect of each of those interconnected chambers, the maximum pressure to which the interconnected chamber with the lowest maximum working pressure can safely be exposed under normal operating conditions; (*pression de service maximale*)

“medical lock”

“medical lock” means a lock through which objects may be passed into or out of a compression chamber while a person inside the compression chamber remains under pressure; (*sas à médicaments*)

“Minister”

“Minister” means,

(a) in relation to any area in respect of which the Minister of Indian Affairs and Northern Development has administrative responsibility for the natural resources therein, the Minister of Indian Affairs and Northern Development, and

(b) in relation to any area in respect of which the Minister of Energy, Mines and Resources has administrative responsibility for the natural resources therein, the Minister of Energy, Mines and Resources; (*ministre*)

“operator”

“operator” means a person who has been authorized, pursuant to paragraph 3.2(1)(b) of the Act, to carry on a work or activity referred to in section 3.1 of the Act that is a diving program or that includes a diving program; (*exploitant*)

“personal diving equipment”

“personal diving equipment” means the diving equipment carried by a diver on the diver’s person during a dive and includes a diving suit, breathing apparatus, bale-out gas bottle and communications equipment; (*équipement personnel de plongée*)

“pilot”

“pilot” means a person who controls the movement of an ADS from within the ADS and who performs from within the ADS any other tasks necessary for the operation of the ADS; (*pilote*)

“pressure vessel”

“pressure vessel” means a closed container capable of withstanding internal or external pressures, or both, greater than one atmosphere; (*appareil sous pression*)

“procedures manual”

“procedures manual” means the procedures manual referred to in paragraph 4(4)(a); (*manuel des méthodes*)

“recognized body”

“recognized body” means an organization, a classification society, a certifying agency, a group of persons or an individual that is acceptable to the Minister as having the expertise and experience to set standards for, or to inspect and certify, diving plant and equipment or parts thereof; (*autorité reconnue*)

“saturation dive”

“saturation dive” means a dive in which saturation diving techniques are used; (*plongée à saturation*)

“saturation diving technique”

“saturation diving technique” means a diving procedure that essentially equilibrates the total pressure of inert gases in the body of a diver with the ambient pressure and allows extended periods of bottom time without additional decompression time required; (*technique de la plongée à saturation*)

“SCUBA”

“SCUBA” means a self-contained open-circuit underwater breathing apparatus; (*appareil de plongée autonome*)

“skip”

“skip” means a stage, cage, basket or wet bell in which a diver may be lowered to or raised from an underwater work site; (*skip*)

“specialized diving doctor”

“specialized diving doctor” means a diving doctor who has completed an advanced diving medical course acceptable to the Minister and who has been accepted in writing by the Minister to provide medical assistance under pressures greater than atmospheric pressure; (*médecin de plongée spécialisé*)

“stand-by diver”

“stand-by diver” means a diver who is dressed-in and trained to operate at the same depths and in the same circumstances as the diver for whom the stand-by diver is standing by, who is at the same dive site as the other diver and who is available without delay to assist that other diver; (*plongeur de secours*)

“supervisor”

“supervisor” means a person appointed in writing by a diving contractor, pursuant to subsection 9(3), as a diving supervisor or an ADS supervisor to supervise a diving operation; (*directeur*)

“surface compression chamber”

“surface compression chamber” means a compression chamber that is not intended to be submerged; (*caisson de compression de surface*)

“surface-oriented diving technique”

“surface-oriented diving technique” means a diving procedure in which the use of a diving bell or diving submersible is not required; (*technique de la plongée avec soutien en surface*)

“total dive time”

“total dive time” means the period commencing when a person begins to prepare for a dive and terminating when the person leaves the water, is not subject to pressures greater than atmospheric pressure and, in accordance with the relevant schedule in the appropriate decompression table, has normal inert gas pressure in the person’s body; (*durée totale de la plongée*)

“umbilical”

“umbilical” means a composite hose or cable or number of separate hoses or cables capable of supplying a breathing mixture, power, heat, communications and other services, as required for a diving operation. (*ombilical*)

APPLICATION

3. These Regulations apply to any diving operation carried on in connection with the exploration or drilling for or the production, conservation, processing or transportation of oil or gas in areas to which the Act applies.

PART I

PROPOSED DIVING PROGRAMS

AUTHORIZATION

4. (1) A person may apply for an authorization under paragraph 3.2(1)(b) of the Act in respect of a proposed diving program by forwarding to the Minister an application, completed in triplicate, in the form prescribed by the Minister.

(2) An authorization under paragraph 3.2(1)(b) of the Act in respect of a proposed diving program is, in addition to any other requirements of these Regulations, subject to the requirements that the operator and the diving contractor, if any, of the diving program shall

- (a) maintain the level of performance of the diving crew, diving plant and equipment and any craft or installation used in the diving program at or above the level of performance indicated in the application referred to in subsection (1) and accepted by the Minister, for the authorization for the diving program, as the level of performance at which the diving program will be carried on;
- (b) where the operator or the diving contractor, as the case may be, proposes to replace a supervisor involved in the diving program or appoint an additional supervisor, provide the Minister with evidence that any replacement or additional supervisor who will be involved in the diving program meets the criteria set out in section 27, 29, 31 or 33 to supervise the category of dive the supervisor will be supervising; and
- (c) where, in any area in which the diving program is being carried on, the environmental conditions, during any period, become more severe than the environmental conditions indicated in the application as being the most severe environmental conditions under which the diving program would be carried on, cease to carry on the diving program in that area during that period.

(3) No authorization may be given under paragraph 3.2(1)(b) of the Act in respect of a proposed diving program unless the applicant provides the Minister with evidence

- (a) that a diving safety specialist was consulted on all safety aspects of the diving program;
- (b) that a diving safety specialist will be available on a 24 hour a day basis to advise any person involved in the diving program, including any person making decisions affecting the safety of divers involved in the diving program, on all safety aspects of the diving program;
- (c) that any supervisor who will be involved in the diving program meets the criteria set out in section 27, 29, 31 or 33 to supervise the category of dive the supervisor will be supervising;

- (d) that the services of a specialized diving doctor, who is familiar with the diving procedures to be used in the diving operation that will form part of the diving program and who is within a travelling distance of the diving operation that is acceptable to the Minister, will be available on a 24 hour a day basis to any person involved in the diving program;
- (e) of any certificates issued by the manufacturer or a recognized body in respect of the diving plant and equipment to be used in the diving program; and
- (f) where a diving program is to be conducted by a diving contractor who is not also the operator of the diving program, that the diving contractor is able to meet any liability for loss, damage, costs or expenses that may be incurred by the diving contractor as a result of the diving program.

(4) No authorization may be given under paragraph 3.2(1)(b) of the Act in respect of a proposed diving program unless approval has been granted by the Minister for the following:

- (a) the procedures manual that contains the procedures to be followed in the diving program, including the procedures referred to in Schedule I;
- (b) the diving plant and equipment to be used in the diving program, including the two-compartment compression chamber referred to in subparagraph 9(5)(h)(ii) and paragraph 47(3)(a), and any equivalent first-aid supplies referred to in paragraph 12(2)(b);
- (c) schematic drawings showing the general arrangement of any diving plant and equipment to be used in the diving program and their location on board the craft or installation on which or from which they will be used in the diving program;
- (d) where a craft is to be used in the diving program and is to be used in a manner referred to in subparagraph 12(2)(p)(iv), to be approved in accordance with section 5, the manner in which the craft is to be used;
- (e) any use in the diving program of a craft in the dynamically positioned mode and the dynamically positioned diving operational capacity graph in respect of the craft;
- (f) where a diving submersible is to be used in the diving program and is to be secured in a manner referred to in subparagraph 18(b)(iii), to be approved in accordance with section 5, the manner in which the diving submersible is to be secured;
- (g) any experimental equipment or technique to be used in the program;
- (h) any evacuation, rescue and treatment facilities and devices provided for the program pursuant to section 23; and
- (i) the contingency plan to be followed in the diving program including the emergency procedures referred to in Schedule II and the particulars of any additional evacuation, rescue and treatment facilities and devices to be provided for use in the diving program.

5. (1) The Minister is authorized to grant, in accordance with subsection (2), any approval prescribed in these Regulations and to make that approval subject to, in addition to the requirements prescribed in these Regulations, such requirements, terms or conditions as the Minister determines.

(2) The Minister shall provide a person with evidence of any approval granted to the person pursuant to subsection (1).

(3) The Minister is authorized to suspend or revoke an approval referred to in subsection (1) for failure to comply with, or for contravention of, the terms and conditions subject to which the approval was granted.

(4) Where the Minister, pursuant to subsection (3), suspends or revokes an approval granted to a person, the Minister shall give the person an opportunity to show cause why the approval should not be suspended or revoked.

PART II
OPERATORS DUTIES

6. (1) The operator of a diving program shall

- (a) arrange for the services of a diving safety specialist who will be available on a 24 hour a day basis to advise any person involved in the diving program, including any person making decisions affecting the safety of divers involved in the diving program, on all safety aspects of the diving program;
- (b) make available a suitable place from which any diving operation that is part of the diving program may be conducted;
- (c) to the extent practicable, give advance notice of any operation that is part of the diving program to the person in charge of any craft or installation in the vicinity of the operation;
- (d) make available adequate forecasts of environmental conditions to the supervisor on duty at a diving operation that is part of the diving program
 - (i) before the diving operation begins, and
 - (ii) during the diving operation, at intervals of not more than 24 hours and at any time where the supervisor requests those forecasts;
- (e) inform the supervisor on duty at a diving operation that is part of the diving program of any matter within the operator's control that may affect the safety of the diving operation;
- (f) provide an adequate and effective system of communication between the supervisor who is on duty and any person, other than the divers and pilots, involved in, or in a position to assist in, a diving operation that is part of the diving program, including a winch or crane operator and a person on the bridge, on the rig floor or in the main control room of a craft or installation used in the diving operation;
- (g) while a diving operation that is part of the diving program is in progress, prominently display notices to that effect
 - (i) in the case of any craft or installation used in the diving operation, on the bridge and in the engine room, and
 - (ii) in the case of any diving plant and equipment used in the diving operation, on any controls the operation of which might endanger a diver or pilot and on any controls for impressed current cathodic protection;
- (h) display in the control room of a craft that will be operated in the dynamically positioned mode in a diving operation that is part of the diving program a copy of the dynamically positioned diving operational capacity graph in respect of the craft;
- (i) in the event that a member of a diving crew involved in the diving program meets with an accident, notify the Minister of the accident by the most rapid and practicable means and submit to the Minister a report of the accident in the form set out in Schedule III;
- (j) in the event of a serious illness affecting a member of a diving crew involved in the diving program or an incident in connection with the diving program, notify the Minister of the illness or incident as soon as possible, investigate the cause of the illness or incident and submit to the Minister a report of that illness or incident, including, in the case of an incident, a report in the form set out in Schedule III;
- (k) submit to the Minister a monthly report of all injuries to any member of a diving crew involved in a diving operation that is part of the diving program; and
- (l) during the course of any diving operation that is part of the diving program, display a copy of the authorization under paragraph 3.2(1)(b) of the Act for that diving program and evidence of any approval granted in relation to that authorization pursuant to section 5 in a prominent place at the diving station for the diving operation.

- (2) The operator of a diving program shall not
- (a) conduct any diving operation that is part of the diving program in the vicinity of any other activity that might pose a danger to any person involved in the diving operation;
 - (b) use, in a diving operation, any craft that has insufficient power or stability for the safe conduct of the diving operation; and
 - (c) prevent any diving contractor involved in the diving program from complying with any of the provisions of these Regulations.

CHANGES IN EQUIPMENT AND PROCEDURES

7. (1) Subject to subsection (2), the operator of a diving program shall
- (a) forthwith repair, replace or alter or arrange for the repair, replacement or alteration of any diving plant and equipment that is being used in the diving program and that is defective or becomes inadequate or unsafe;
 - (b) alter any procedure set out in the procedures manual for the diving program that becomes unsafe, inadequate or deficient; and
 - (c) where necessary, initiate a new procedure in respect of the diving program.

(2) Where, pursuant to subsection (1), the operator of a diving program

- (a) repairs, replaces or alters or arranges for the repair, replacement or alteration of any diving plant and equipment referred to in paragraph (1)(a), other than a routine repair, replacement or alteration carried out by a competent person,
- (b) alters a procedure set out in the procedures manual for the diving program, or
- (c) initiates a new procedure in respect of the diving program,

the operator shall, prior to any activity referred to in paragraphs (a) to (c), obtain such approval as the Minister determines pursuant to paragraph 3.2(1)(b) of the Act.

AUTHORIZATION

8. (1) An operator may apply for authorization pursuant to subsection 12.2(1) of the Act to use equipment, methods, measures or standards that do not comply with these Regulations.

(2) An application referred to in subsection (1) shall set out the manner in which the equipment, methods, measures or standards that are the subject of the application provide a level of safety and pollution prevention at least equivalent to that which would be provided by compliance with these Regulations.

PART III

DIVING CONTRACTORS

DUTIES

9. (1) Subject to subsection (2), no diving contractor shall conduct a diving operation unless the diving contractor has arranged for the services of a diving safety specialist, other than the diving safety specialist available pursuant to paragraph 4(3)(b), who will be available on a 24 hour a day basis to advise any person involved in the diving operation, including any person making decisions affecting the safety of divers involved in the diving operation, on all safety aspects of the diving operation.

(2) Where the operator referred to in subsection 6(1) and the diving contractor referred to in subsection (1) are the same person, the diving safety specialist required pursuant to subsection (1) may be the same person as the diving safety specialist required pursuant to paragraph 4(3)(b).

(3) No diving contractor shall conduct a diving operation that includes

- (a) a category I dive unless the diving contractor has appointed in writing a person who meets the criteria set out in section 27, 29 or 31 to supervise the diving operation and such a supervisor is present at all times during the diving operation;
- (b) a category II dive unless the diving contractor has appointed in writing a person who meets the criteria set out in section 29 or 31 to supervise the diving operation and such a supervisor is present at all times during the diving operation;
- (c) a category III dive unless the diving contractor has appointed in writing a person who meets the criteria set out in section 31 to supervise the diving operation and such a supervisor is present at all times during the diving operation; and
- (d) the use of an ADS unless the diving contractor has appointed in writing a person who meets the criteria set out in section 33 to supervise the diving operation and such a supervisor is present at all times during the diving operation.

(4) No diving contractor shall, in a diving operation conducted by the diving contractor, employ a person:

- (a) to make a category I dive unless the person meets the criteria set out in section 53, 55 or 57;
- (b) to make a category II dive unless the person meets the criteria set out in section 55 or 57;
- (c) to make a category III dive unless the person meets the criteria set out in section 57; or
- (d) to pilot an ADS unless the person meets the criteria set out in section 64.

(5) A diving contractor who conducts a diving operation that is part of a diving program shall

- (a) ensure that every diving supervisor employed by the diving contractor in the diving program on a full-time basis has the opportunity to supervise each year a minimum of 12 dives appropriate to the category of dive for which the supervisor is certified;
- (b) ensure that every ADS supervisor employed by the diving contractor in the diving program on a full-time basis has the opportunity to supervise each year a minimum of six ADS dives;
- (c) ensure that every diver employed by the diving contractor in the diving program on a full-time basis has the opportunity to make each year a minimum of 24 dives, totalling a minimum of 20 hours of bottom time, appropriate to the category of dive for which the diver is certified;
- (d) ensure that every pilot employed by the diving contractor in the diving program on a full-time basis has the opportunity to make each year at least four ADS dives totalling a minimum of 16 hours of bottom time;
- (e) ensure that, except in the case of an emergency, each member of a diving crew involved in the diving operation, in every 24 hour period,
 - (i) has a rest period of not less than eight consecutive hours, and
 - (ii) is required to work not more than 12 hours;
- (f) follow the procedures set out in the procedures manual for the diving program and any altered or newly initiated procedures referred to in section 7 for the diving program;
- (g) maintain, at the craft or installation from which the diving operation is conducted, two copies of these Regulations and a copy of the applicable procedures manual and make them available to any person involved or to be involved in the diving operation and, on request, to the Minister or a conservation engineer;
- (h) provide or arrange for the provision of any diving plant and equipment necessary for the safe conduct of the diving operation, including
 - (i) adequate firefighting equipment, and
 - (ii) a two-compartment compression chamber that

- (A) has been approved for the diving program, in accordance with section 5, for use at a pressure that is not less than six atmospheres absolute and, where the maximum working pressure that may be encountered during any dive that is part of the diving operation is greater than six atmospheres absolute, for use at the maximum pressure plus one atmosphere,
 - (B) is suitable for the diving operation, and
 - (C) is located in a readily accessible place on board the craft or installation from which the diving operation is conducted, except in the case of a diving operation that is conducted at a depth of 10 m or less, and, where the supervisor of the diving operation approves, may be located within one hour's travelling time from the dive site;
- (j) use only diving plant and equipment that is of sound construction, adequate strength, free from patent defects and in good working order;
- (j) provide for the protection of the diving plant and equipment used in the diving operation from malfunction in the environmental conditions under which the diving plant and equipment are to be used, including conditions of low or high temperatures;
- (k) permit only such repair, replacement and alteration of diving plant and equipment used in the diving operation as has been approved pursuant to subsection 7(2) and ensure that routine repair, replacement or alteration is carried out by a competent person;
- (l) provide adequate illumination of the dive site and the underwater work site of the diving operation
 - (i) during any period of darkness or low visibility, and
 - (ii) where the supervisor of the diving operation requests the illumination and where the nature of the diving operation so permits;
- (m) provide a diving operations logbook that is permanently bound and has numbered pages;
- (n) retain any diving operations logbook referred to in paragraph (m) that is delivered to the diving contractor by a supervisor pursuant to subsection 50(5), and any records or copies delivered to the diving contractor by a supervisor pursuant to subsection 52(3), for a period of not less than two years after the day of the last entry made in it; and
- (o) produce, on request, any logbooks, records or copies referred to in paragraph (n) for inspection by the Minister or a conservation engineer.

(6) Where continuance of a diving operation would compromise or is likely to compromise the safety or would endanger or is likely to endanger the health, well-being or life of, any person involved in the diving operation, the diving contractor who conducts the diving operation shall forthwith interrupt or discontinue the diving operation.

10. (1) A diving contractor who conducts a diving operation shall not permit any person involved in the diving operation to be exposed to a pressure greater than atmospheric pressure in a compression chamber used in connection with the diving operation unless

- (a) not more than 12 months prior to the day of the exposure, a diving doctor has certified that the person is fit to be exposed to the pressure; and
- (b) copies of the certificate referred to in paragraph (a) are in the possession of the diving contractor and the person.

(2) Subsection (1) does not apply

- (a) to any person who requires therapeutic compression; or
- (b) in the case of an emergency, to a person who can provide medical treatment, where no person certified pursuant to paragraph (1)(a) is available.

EXAMINATION AND TESTING OF DIVING PLANT AND EQUIPMENT

11. (1) A diving contractor who conducts a diving operation shall use or permit to be used in the diving operation

- (a) only diving plant and equipment that has been examined and, where appropriate, subjected to a pressure leak test using an appropriate breathing mixture to a pressure that is not less than six atmospheres absolute and, where the maximum working pressure that may be encountered during any dive that is part of the diving operation is greater than six atmospheres absolute, to the maximum pressure plus one atmosphere
 - (i) not more than three months prior to the day on which it is to be used,
 - (ii) on mobilization and assembly, and
 - (iii) following any repair, replacement or alteration of the diving plant and equipment that might affect its safety;
 - (b) in the case of a compression chamber, only a compression chamber that
 - (i) not more than two years prior to the day on which it is to be used, has been subjected to a pressure leak test to the maximum working pressure of the chamber using an appropriate breathing mixture, and
 - (ii) not more than five years prior to the day on which it is to be used, has been subjected to an internal pressure test of at least 1.25 times the maximum working pressure of the chamber;
 - (c) in the case of a pressure vessel for compressed gases that is not intended to be immersed in water, including compressed air cylinders, only a pressure vessel that has been subjected to
 - (i) a thorough examination and internal pressure test not more than five years prior to the day on which it is to be used, and
 - (ii) an internal inspection for corrosion not more than two years prior to the day on which it is to be used, or such longer period as is determined by the Minister pursuant to paragraph 3.2 (1)(b) of the Act;
 - (d) in the case of a pressure vessel for compressed gases that is intended to be immersed in water, only a pressure vessel that has been subjected to
 - (i) a thorough examination and internal pressure test not more than two years prior to the day on which it is to be used, and
 - (ii) an internal inspection for corrosion not more than one year prior to the day on which it is to be used, or such longer period as is determined by the Minister pursuant to paragraph 3.2(1)(b) of the Act; and
 - (e) in the case of lifting equipment for a launch and recovery system, only lifting equipment that has been tested
 - (i) on first installation and, thereafter, before operational use of the lifting equipment following a repair, replacement or alteration, other than a routine repair, replacement or alteration carried out by a competent person, by means of a functional test, and
 - (ii) every six months following a functional test carried out pursuant to subparagraph (i), by means of a test that tests the capability of the lifting equipment to operate safely under its maximum working load.
- (2) A diving contractor who conducts a diving operation shall ensure that
- (a) each examination and test required to be carried out for the purposes of subsection (1) is carried out by or under the supervision of a recognized body and in accordance with an acceptable standard; and

- (b) where a pneumatic or hydrostatic pressure test is carried out for the purposes of subsection (1), adequate precautions are taken to ensure the safety of the personnel involved, the diving plant and equipment and the craft or installation used in the test.

(3) A diving contractor who conducts a diving operation shall keep a register in which are inserted or to which are attached certificates

- (a) containing details and results of examinations and tests carried out pursuant to subsection (1), and
- (b) signed by the person by whom or under whose supervision the examinations or tests were carried out, and shall retain the register
- (c) in the case of a register that contains certificates relating to pressure vessels, for at least five years after the day of the last entry in it; and
- (d) in any other case, for at least two years after the day of the last entry in it.

(4) A diving contractor who conducts a diving operation shall not use or permit to be used in the diving operation any diving plant and equipment that is unsafe as determined by an examination or test carried out pursuant to subsection (1).

DIVING PLANT AND EQUIPMENT

12. (1) A diving contractor who conducts a diving operation shall not use or permit to be used any diving plant and equipment in the diving operation unless the design thereof is such that

- (a) it enables divers and pilots to safely enter and leave the water;
- (b) divers can be safely compressed or decompressed in accordance with the relevant schedule in the appropriate decompression table;
- (c) where a hot-water system is used as the means of heating a diver, a hot-water reservoir is, where practicable, included in the system; and
- (d) the body temperature of a diver or pilot can be maintained within safe limits during the diving operation.

(2) A diving contractor who conducts a diving operation shall ensure that

- (a) prior to the time a diver involved in the diving operation enters the water, the diver is provided with
 - (i) a diving harness complete with pelvic support and lifting ring,
 - (ii) a depth indicator that is, where practicable, a type that can be monitored from the surface, and
 - (iii) during any period of darkness or low visibility or where requested by the supervisor of the diving operation, a lamp or other suitable device that indicates the diver's location;
- (b) the first-aid supplies listed in Part I of Schedule IV, or equivalent first-aid supplies approved in accordance with section 5 for the diving program of which the diving operation is a part, are
 - (i) packed in such a manner that they fit through the medical lock of any surface compression chamber used in the diving operation, and
 - (ii) kept on the craft or installation from which the diving operation is conducted, except where it is impracticable in a category I diving operation or an ADS diving operation and where the supervisor of the diving operation approves, in which case the supplies may be kept readily available within a travelling distance of the diving operation that is acceptable to the supervisor

and, where a diving bell or diving submersible is used in the diving operation, the first-aid supplies listed in Part II of Schedule IV, or equivalent first-aid supplies approved in accordance with section 5 for the diving program of which the diving operation is a part, are kept in the diving bell or the compression chamber of the diving submersible;

- (c) any airtight container used to pack any of the first-aid supplies referred to in paragraph (b) for use in the diving operation has a suitable means of equalizing pressure;
- (d) where the safe use of the diving plant and equipment depends on the pressure or depth at which it is used, the diving plant and equipment is clearly marked with the maximum working pressure or the maximum depth at which it may be used;
- (e) any lifeline used in the diving operation has a manufacturer's breaking strength rating in accordance with an acceptable standard;
- (f) any gas bottle used in the diving operation is clearly marked with the name and chemical formula of its contents;
- (g) any winch used in the diving operation to raise or lower a skip, diving bell, diving submersible or ADS
 - (i) is so constructed that
 - (A) a brake or mechanical locking device is applied when the control lever, handle or switch is not held in the operating position,
 - (B) the brakes have the capability of stopping and holding 100 per cent of the maximum working load with the outermost layer of wire on the drum,
 - (C) the brakes engage automatically on loss of power, and
 - (D) the lowering and raising of loads is controlled by power drives independent of the brake mechanism,
 - (ii) is not fitted with a pawl and ratchet gear on which the pawl has to be disengaged before commencing a lowering or raising operation,
 - (iii) is so designed as to prevent the possibility of freeze-up when in operation,
 - (iv) is equipped with a lifting wire capable of withstanding a functional test in accordance with an acceptable standard, and
 - (v) complies with an acceptable standard of construction for winches;
- (h) any prime mover used in the diving operation to operate lifting equipment for a skip, diving bell, diving submersible or ADS is not used for any other purpose;
- (i) except where alternative lifting equipment is provided for any skip, diving bell, diving submersible or ADS used in the diving operation, an auxiliary prime mover capable of lifting the maximum working load is provided;
- (j) where, during the diving operation, a skip, diving bell, diving submersible or ADS is being held in position by a hydraulically operated winch that is not equipped with a mechanical locking device, the hydraulic pumps are kept running during the diving operation;
- (k) where the Minister so determines, pursuant to paragraph 3.2(1)(b) of the Act, any craft or installation used in the diving operation is equipped with
 - (i) a receiver system that is compatible with the relocation transponder system fitted to any diving bell, diving submersible or ADS that is used in the diving operation, and
 - (ii) a hand-held receiver that is suitable for use by a diver or pilot in achieving a final location and that is compatible with the receiver system on the craft or installation and the relocation transponder system on the diving bell, diving submersible or ADS;
- (l) any skip, diving submersible or ADS used in the diving operation is equipped with
 - (i) a secondary lifting eye or similar device that is of at least the same strength as the primary lifting eye, and

- (ii) where practicable, an additional cable in the form of a suitable tag rope so designed that, in the event that the primary lifting cable breaks during a water-air interface transport, the tag rope will not permit the skip, diving submersible or ADS to descend to a depth greater than 25 m,

and has readily available, for use in an emergency, a secondary lifting cable that has at least the same strength as the primary lifting cable and that is compatible with the secondary lifting eye or similar device;

- (m) any skip used in the diving operation to transport divers through the water-air interface is
 - (i) large enough to carry, in uncramped conditions, at least two divers with their personal diving equipment,
 - (ii) secured against tipping or spinning,
 - (iii) not encumbered by any equipment that may interfere with an occupant's foothold or handhold,
 - (iv) equipped with handholds arranged in such a manner that crushed-hand injuries during launch or recovery are avoided,
 - (v) so constructed or equipped that its occupants are secure against falling out of the skip, and
 - (vi) in the case of a skip that is a wet bell, equipped with an additional band mask or full face mask;
- (n) any diving submersible or ADS used in the diving operation is equipped with
 - (i) a stroboscopic light that is automatically activated in the water and a pinger that operates at a frequency of 37.5 kHz, and
 - (ii) a relocation transponder system that operates at a frequency of 37.5 kHz, where the Minister so determines pursuant to paragraph 3.2(1)(b) of the Act;
- (o) a secondary source of power that will operate in the event of a failure of the primary source of power is provided for the diving operation, can be brought on-line rapidly and has sufficient capacity to
 - (i) operate the handling system for any skip, diving bell, diving submersible or ADS used in the diving operation,
 - (ii) heat any compression chamber used in the diving operation and heat, for the period required to complete the diving operation, any diver who is involved in the diving operation and who is in the water,
 - (iii) sustain the life-support system of any compression chamber used in the diving operation and of any diver who makes a dive that is part of the diving operation,
 - (iv) illuminate the interior of any compression chamber used in the diving operation, and
 - (v) operate any communication system and monitoring system used in the diving operation; and
- (p) where any craft is used in the diving operation, there is provided a safe means of ensuring that the craft is, during the diving operation,
 - (i) at anchor,
 - (ii) made fast to the shore or to an installation,
 - (iii) maintained in position using its propulsion system in accordance with section 25, or
 - (iv) used in such a manner as the Minister determines pursuant to paragraph 3.2(1)(b) of the Act or as approved in accordance with section 5 for the diving program of which the diving operation is a part.

COMMUNICATION SYSTEMS

13. (1) Subject to subsection (2), no diving contractor shall conduct a diving operation unless there is available for use in the diving operation

- (a) for communications between the supervisor of the diving operation and any diver or pilot involved in the diving operation
 - (i) a primary communication system that has
 - (A) sound reproduction adequate to enable breathing to be clearly heard and oral communications to be clearly heard and understandable, and
 - (B) a recording device that continuously records all oral communications while a dive is in progress, and
 - (ii) a secondary communication system that allows the supervisor and the divers or pilots to communicate orally in the event of a failure of the primary communication system; and
- (b) for communications between the supervisor and any person involved in, or in a position to assist in, the diving operation, other than the divers and pilots referred to in paragraph (a), a communication system that meets the requirements of paragraph 6(1)(f).

(2) Subsection (1) does not apply to a diving operation where SCUBA is used and where it is impracticable to use the communication systems referred to in that subsection, in which case no diving contractor shall conduct such a diving operation unless there is available for use in the diving operation an alternative method of communication that is adequate for the type of diving operation and that the supervisor of the diving operation considers suitable for the diving operation.

PRESSURE VESSELS

14. No diving contractor who conducts a diving operation shall use or permit to be used in the diving operation a pressure vessel intended for human occupancy unless the pressure vessel is equipped with

- (a) a breathing mask for each occupant of the pressure vessel;
- (b) a means of maintaining the oxygen, carbon dioxide, temperature and humidity in the pressure vessel at levels and pressures that are safe for the occupants; and
- (c) for use in an emergency, a back-up capability to maintain the levels and pressures referred to in paragraph (b) for a minimum of, in the case of a diving bell or the compression chamber of a diving submersible, 24 hours and, in any other case, 48 hours.

COMPRESSION CHAMBERS

15. No diving contractor who conducts a diving operation shall use or permit to be used a compression chamber in the diving operation unless the compression chamber

- (a) meets the requirements of section 14;
- (b) is designed and constructed in accordance with an acceptable standard;
- (c) provides a suitable environment for its occupants, including amenities appropriate to the type, depth and duration of the diving operation;
- (d) is equipped with doors that act as pressure seals and that can be opened from both the inside and the outside;
- (e) is designed to minimize the risk of fire and
 - (i) is constructed of only non-combustible or fire-resistant materials, and
 - (ii) is equipped with suitable firefighting capabilities;

(f) is fitted with adequate equipment, including facilities for

- (i) supplying to and maintaining for its occupants an appropriate breathing mixture,
- (ii) lighting and heating the compression chamber, and
- (iii) removing carbon dioxide;

(g) is equipped with valves, gauges and other fittings necessary to indicate and control the internal pressures of each compartment from outside the compression chamber;

(h) is fitted with piping that has at least one external shut-off valve, where practicable, immediately outside the point at which the piping enters the compression chamber and one internal shut-off valve immediately inside that point;

(i) is fitted with hull integrity valves that clearly indicate whether the valves are in the open or closed position and that are clearly labelled by name and number;

(j) other than a diving bell and the compression chamber of a diving submersible, is equipped with a built-in breathing system that permits outside dumping of exhaled gas;

(k) where appropriate, is equipped with an emergency shut-off valve that automatically shuts off the flow of gas from the compression chamber if the velocity or volume of gas exceeds the preset limit;

(l) is equipped with relief valves resistant to marine corrosion;

(m) has all of its internal electrical wiring insulated and in conduit, except for the wiring for low-power devices such as telephones;

(n) is cleaned and disinfected using only products that are

- (i) recommended by the manufacturer for that type of use,
- (ii) well proven for that purpose,
- (iii) non-toxic at any pressure,
- (iv) non-corrosive, and
- (v) safe to use;

(o) where used in a category II dive or a category III dive or, where practicable, in a category I dive, is provided with a coupling arrangement that is suitable for the safe transfer of persons under pressure and that is designed to prevent accidental release;

(p) is provided with a clamping mechanism that

- (i) is suitable for coupling a diving bell with the surface compression chamber,
- (ii) clearly indicates when the clamping mechanism is fully engaged, and
- (iii) cannot be disengaged while pressurized;

(q) is supplied with breathing mixture through a gas control panel that

- (i) has distinct indicators of the function of each valve and gauge, and
- (ii) is designed so as to minimize the possibility of supplying an incorrect breathing mixture;

(r) if manufactured after December 31, 1990,

- (i) is fitted with a device to record continuously and to preserve at least the last recorded four hours of data respecting temperature, oxygen levels, depth, time and oral communications and, where practicable, carbon dioxide and humidity levels, and

- (ii) where practicable, is provided with a means to permit video monitoring of its occupants; and
- (s) if manufactured on or before December 31, 1990, meets the requirements set out in paragraph (r) where the Minister so determines pursuant to paragraph 3.2(1)(b) of the Act.

SURFACE COMPRESSION CHAMBERS

16. No diving contractor who conducts a diving operation shall use or permit to be used a surface compression chamber in the diving operation unless the surface compression chamber

- (a) meets the requirements of sections 14 and 15;
- (b) contains at least two independently sealable compartments;
- (c) contains sufficient space in at least one of its compartments to enable each occupant to lie down comfortably in the compartment;
- (d) where a person will be in the surface compression chamber for a period of eight consecutive hours or less, has an internal vertical diameter of at least 1.5 m;
- (e) where a person will be in the surface compression chamber for a period of more than eight consecutive hours, has an internal vertical diameter of at least 2 m;
- (f) is equipped with a medical lock;
- (g) where the surface compression chamber will be used for a period of more than 12 consecutive hours, has adequate sanitation facilities;
- (h) if manufactured after December 31, 1990, is fitted with a through-hull connector suitable for medical monitoring of its occupants; and
- (i) if manufactured on or before December 31, 1990, meets the requirements of paragraph (h) where the Minister so determines pursuant to paragraph 3.2(1)(b) of the Act.

DIVING BELLS

17. No diving contractor who conducts a diving operation shall use or permit to be used a diving bell in the diving operation unless the diving bell

- (a) meets the requirements of sections 14 and 15;
- (b) is equipped to permit the safe transfer of persons under pressure to and from a surface compression chamber;
- (c) is of a design that
 - (i) provides for an internal space of at least 2 m³ for two-person occupancy and 3 m³ for three-person occupancy,
 - (ii) enables divers to enter and exit without difficulty, and
 - (iii) allows at least two divers dressed-in for a diving operation to be seated comfortably therein;
- (d) is equipped with valves, gauges and other fittings necessary to control the internal pressure and to indicate both inside the diving bell and at the diving station the internal and external pressures;
- (e) is so equipped that any valve used to pressurize the diving bell is spring-loaded so as to close when not held in the open position;
- (f) contains adequate equipment, including reserve facilities, for supplying the appropriate breathing mixture to persons occupying or working from the diving bell, which reserve facilities shall be protected against inadvertent operation and be capable of being brought on-line from inside the diving bell without the assistance of any other person;

(g) is equipped with a two-way oral communication system by means of which a person inside the diving bell can communicate with the diving supervisor of the diving operation and, via the diving supervisor, with other persons;

(h) contains equipment for lighting and heating the diving bell;

(i) is equipped with suitable emergency life-support equipment and provisions for each occupant of the diving bell;

(j) is equipped with a lifting device sufficient to enable an unconscious or injured diver to be hoisted into the diving bell by a person located in it;

(k) is provided with lifting equipment that enables the diving bell to be lowered to the depth at which the diving operation is to be conducted, to be maintained in its position and to be raised, all without excessive lateral, vertical or rotational movement;

(l) is provided with a means whereby, in the event of the failure of the lifting equipment referred to in paragraph (k), the diving bell can be returned to the surface and, where that means involves the shedding of weights, the controls for that shedding can be operated from within the diving bell, and a means is incorporated to prevent the accidental shedding of those weights;

(m) in addition to a primary lifting cable, is equipped with a suitable tag rope so designed that, in the event the primary cable breaks during a water-air interface transport, the tag rope will not permit the diving bell to descend to a depth greater than 25 m;

(n) is equipped with a secondary lifting eye, or similar device that is of at least the same strength as the primary lifting eye, and is provided with a secondary lifting cable that is readily available and that has at least the same strength as the primary lifting cable and is compatible with the secondary lifting eye or similar device;

(o) is fitted with equipment to enable occupants of the diving bell to monitor the temperature, oxygen and carbon dioxide levels within the diving bell;

(p) is equipped with a stroboscopic light that is automatically activated in the water and a pinger that operates at a frequency of 37.5 kHz;

(q) where the Minister so determines pursuant to paragraph 3.2(1)(b) of the Act, is fitted with a relocation transponder system that operates at a frequency of 37.5 kHz;

(r) where appropriate, is fitted with hull integrity valves and non-return valves on all gas and, where practicable, hot-water circuits connected to the diving bell;

(s) if manufactured after December 31, 1990,

- (i) is so designed that, if necessary, a diver within the diving bell can
 - (A) disconnect or shear the primary lifting cable and the umbilical,
 - (B) disconnect or shear any other attachments that might prevent ascent,
 - (C) start, accelerate, decelerate or stop the ascent, and
 - (D) where practicable, start, accelerate, decelerate or stop the descent, and
- (ii) is fitted with a device to record continuously and to preserve at least the last recorded four hours of data respecting temperature, oxygen levels, depth, time, oral communications, internal and external ambient pressure, and the quantity of breathing mixture and electrical power available for use in an emergency and, where practicable, carbon dioxide and humidity levels; and

(t) if manufactured on or before December 31, 1990, meets the requirements set out in paragraph (s) where the Minister so determines pursuant to paragraph 3.2(1)(b) of the Act.

DIVING SUBMERSIBLES

18. No diving contractor who conducts a diving operation shall use or permit to be used a diving submersible in the diving operation unless

- (a) the compression chamber of the diving submersible meets the requirements of sections 14, 15 and 17, except paragraphs 17(k) to (n) and subparagraph 17(s)(i);
- (b) during any period in which the diving submersible is in use, it is
 - (i) resting on the bottom,
 - (ii) firmly secured at or near the work site where it is to be used, or
 - (iii) secured in such a manner as the Minister determines pursuant to paragraph 3.2(1)(b) of the Act or as approved in accordance with section 5 for the diving program of which the diving operation is a part;
- (c) there is a means of maintaining at a safe level the body temperature of a person in the compression chamber of the diving submersible and a person in the water making a dive from the diving submersible; and
- (d) a diver is present in the compression chamber of the diving submersible at any time that a dive is in progress.

OXYGEN SUPPLY SYSTEMS

19. (1) Where an oxygen supply system is to be used in a diving operation, the diving contractor who conducts the diving operation shall use or permit to be used only an oxygen supply system the design of which complies with the requirements that:

- (a) the use of hoses and piping be kept to a minimum;
- (b) the materials used be compatible with oxygen at the pressures and temperatures for which the oxygen supply system is designed;
- (c) the possibility of contamination of the oxygen by other gases, and vice versa, be minimized;
- (d) high-velocity flows of oxygen be avoided;
- (e) the differential pressure throughout the oxygen supply system be kept as low as is practicable; and
- (f) quick-shut-off valves not be installed in the oxygen supply system except for one-quarter-turn valves that are connected to lines with reduced oxygen pressure and that may be used in an emergency.

(2) A diving contractor who conducts a diving operation shall ensure that

- (a) any oxygen storage area for the diving operation is
 - (i) adequately ventilated,
 - (ii) properly identified with warning signs,
 - (iii) equipped with a fire suppression system,
 - (iv) kept clear of and located as far as practicable away from combustible materials, and
 - (v) if located in an enclosed area, equipped with an oxygen detector and an alarm designed to give warning of oxygen levels in excess of the concentration of oxygen in the ambient air;
- (b) any person responsible for handling or otherwise dealing with oxygen is specially trained in that work; and
- (c) oxygen is transferred using only pumps, compressors or pressure differential systems that are
 - (i) recommended for that purpose by the manufacturer,

- (ii) operated in accordance with the manufacturer's instructions, and
- (iii) operated by a person authorized to do so by the supervisor of the diving operation.

BREATHING MIXTURE SUPPLY SYSTEMS

20. A diving contractor who conducts a diving operation shall use or permit to be used in the diving operation only a breathing mixture supply system that is so designed that

- (a) any interruption of the supply of breathing mixture to a person will not affect in any manner the supply of breathing mixture to any other person; and
- (b) any failure of the primary supply of breathing mixture to a person will not affect in any manner the supply of breathing mixture to that person from that person's bale-out gas bottle or from the reserve referred to in subparagraph 22(1)(a)(ii).

21. No diving contractor who conducts a diving operation shall use in the diving operation an on-line gas blender or diver's gas recovery system unless, at all times that the blender or recovery system is in use,

- (a) there is a buffer tank in use downstream of the blender or recovery system, as the case may be;
- (b) the blended breathing mixture is constantly analysed for its oxygen content; and
- (c) the quantity, referred to in clause 22(1)(a)(iii)(C), of appropriate breathing mixture bypassing, in an emergency, the blender or recovery system, as the case may be, is available for immediate use.

QUANTITY AND QUALITY OF BREATHING MIXTURE

22. (1) No diving contractor who conducts a diving operation shall conduct or permit the commencement or continuation of the diving operation unless

- (a) the total quantity of appropriate breathing mixture that is available at any time during the diving operation consists of
 - (i) an adequate quantity to complete the diving operation,
 - (ii) a reasonable quantity for a reserve supply, and
 - (iii) for use in an emergency, an additional supply that is
 - (A) in the case of a diving operation in which a diving bell is used, a sufficient quantity to meet the needs of the occupants of the diving bell for a minimum of 24 hours,
 - (B) in the case of a diving operation in which an ADS is used, a sufficient quantity to meet the needs of the occupants of the ADS for a minimum of 48 hours,
 - (C) in the case of a diving operation in which an on-line gas blender or diver's gas recovery system is used, a sufficient quantity to allow the divers to continue, interrupt or discontinue the diving operation safely, and
 - (D) in the case of a diving operation in which a surface compression chamber is used, a quantity that is twice the amount required to pressurize the surface compression chamber to a pressure equivalent to the pressure at the greatest depth in respect of which the surface compression chamber will be used in the diving operation;
- (b) the purity of the breathing mixture is of an acceptable standard; and
- (c) the quantities referred to in subparagraphs (a)(ii) and (iii) are available for immediate use at a flow rate, temperature and pressure that are safe for the user.

(2) No diving contractor shall conduct a diving operation unless

- (a) any breathing mixture to be used in the diving operation is

- (i) analysed for the accuracy of its oxygen content and, where practicable, its other contents immediately prior to the commencement of the dive that is part of the diving operation, and
- (ii) supplied at temperature and humidity levels that are safe; and
- (b) the levels of oxygen and carbon dioxide in the breathing mixture to be used in the diving operation are maintained at levels that are suitable for the type, depth and duration of the diving operation.

EVACUATION, RESCUE AND TREATMENT FACILITIES

23. (1) A diving contractor who conducts a diving operation shall provide for the availability of evacuation, rescue and treatment facilities and devices that

- (a) are suitable for the type, depth and duration of the diving operation and for the environmental conditions under which the diving operation is conducted; and
- (b) have been approved in accordance with section 5 for the diving program of which the diving operation is a part.

(2) The evacuation, rescue and treatment facilities and devices referred to in subsection (1) shall be available

- (a) for use by persons involved in the diving operation as quickly as possible and within the period of time for which the life-support system of the surface compression chamber, diving bell or ADS used in the diving operation is capable of maintaining the life of the occupants; and
- (b) where practicable, on site.

MEDICAL SERVICES

24. A diving contractor who conducts a diving operation shall

(a) ensure that at all times during the diving operation each diving crew involved in the diving operation includes a hyperbaric first-aid technician available on the craft or installation from which the diving operation is conducted;

(b) arrange for the services, on a 24 hour a day basis, of a specialized diving doctor, referred to in paragraph 4(3)(d), who is familiar with the diving procedures to be used in the diving operation and who is within a travelling distance of the diving operation that is acceptable to the Minister, to provide medical assistance in the event of an emergency;

(c) ensure that an adequate means of communication exists on a 24 hour a day basis between

- (i) the diving station, or
- (ii) the craft or installation from which the diving operation is being conducted

and the specialized diving doctor referred to in paragraph (b); and

(d) locate the nearest surface compression chamber that is compatible with the equipment used in the diving operation and that is suitable for the type, depth and duration of the diving operation to be conducted and shall make arrangements for the use of that surface compression chamber in the event of an emergency.

CRAFT IN DYNAMICALLY POSITIONED MODE

25. No diving contractor who conducts a diving operation shall use or permit to be used a craft in the dynamically positioned mode in the diving operation unless that use was specifically approved in accordance with section 5 for the diving program of which the diving operation is a part and the following requirements are complied with:

- (a) the craft is so designed and constructed that

- (i) more than one prime mover is available for each fore, aft and thwartship thruster,
 - (ii) in the event of the failure of any prime mover or manoeuvring unit of the craft, the position of the craft can be maintained during the period it would take for the safe recovery of divers,
 - (iii) the arrangement of the thrusters and their size and number enable, in the event of the loss of any thruster of the craft, the heading and the position of the craft to be maintained within the environmental and operational capacity limits of that craft for the time it takes to safely recover any skip, diving bell or ADS used in the diving operation,
 - (iv) for each manoeuvring unit necessary to maintain the craft in the dynamically positioned mode, other than the propellers and energy plant units, there is a reserve duplicate unit and an automatic and a manual system to switch from the on-line unit to the duplicate unit,
 - (v) the supervisor on duty at the diving station on the craft can, by means of an alarm system connecting the bridge of the craft to the diving station on the craft, be kept informed by the person who controls the dynamic positioning system of any station-keeping problems or any other problems that might affect the safety of the diving operation,
 - (vi) a computer system controls the dynamic positioning of the craft and another independent, duplicate computer system is available to take over control automatically in the event of failure of the on-line computer system,
 - (vii) there are on line at least two reference systems independently linked into each computer system referred to in subparagraph (vi),
- (b) during any time that a person involved in the diving operation is in the water
- (i) a person who is responsible for the navigation of the craft and a person who is responsible for the control of the dynamic positioning system are in the control room of the craft,
 - (ii) the machinery spaces of the craft, except those in the pontoons of a semi-submersible craft, are manned, and
 - (iii) in any one manoeuvre, the craft is not moved more than 5 m or the heading of the craft is not changed more than 5°, whichever is the lesser movement in relation to the location of the dive site of the diving operation; and
- (c) any person who is responsible for the control of the dynamic positioning system of the craft has at least six months experience using both the manual and the automatic modes of that particular system or, where that is impracticable, of a similar system, and at least two weeks briefing by the designer or manufacturer of the craft on the behaviour and hydrodynamics of that craft when operating in the dynamically positioned mode.

DIVING SAFETY SPECIALISTS

26. (1) No operator, pursuant to paragraph 6(1)(a), or diving contractor, pursuant to subsection 9(1), shall engage the services of a person as a diving safety specialist unless the person holds a diving supervisor's certificate that is issued pursuant to section 71 and that is appropriate to the category of dive in respect of which that person will be giving advice and

- (a) has passed a test that
 - (i) is acceptable to the Minister; and
 - (ii) indicates that the person has an adequate knowledge of the safety, personnel, technical, operational, management, marketing and regulatory aspects of diving operations appropriate to the category of diving supervisor's certificate that person holds; or
- (b) until December 31, 1990, has satisfied the Minister that the person's knowledge is equivalent to the knowledge described in paragraph (a).

(2) A person who has been engaged as a diving safety specialist for a diving program by an operator, pursuant to paragraph 6(1)(a), shall

- (a) advise the operator on all safety aspects of the diving program including
 - (i) the application for authorization, under paragraph 3.2(1)(b) of the Act, for the diving program,
 - (ii) any application made by the operator for authorization pursuant to subsection 12.2(1) of the Act, and
 - (iii) any decision by the operator to interrupt or discontinue the diving program or any portion of the diving program for safety reasons; and
- (b) be available on a 24 hour a day basis to advise any person involved in the diving program, including persons making decisions affecting the safety of divers involved in the diving program, on the safety aspects of the diving program.

(3) A person who has been engaged as a diving safety specialist for a diving operation by a diving contractor, pursuant to subsection 9(1), shall

- (a) advise the diving contractor on all safety aspects of the diving operation; and
- (b) be available on a 24 hour a day basis to advise any person involved in the diving operation, including any person making decisions affecting the safety of divers involved in the diving operation, on all safety aspects of the diving operation.

(4) A diving safety specialist referred to in subsection (2) or (3) shall, in advising any person pursuant to those subsections, take into account as a primary consideration the safety of any divers involved in the diving program or diving operation, as the case may be.

PART V

SUPERVISORS

SUPERVISION OF A CATEGORY I DIVING OPERATION

27. No person shall supervise a category I diving operation unless the person

(a) has been appointed in writing pursuant to paragraph 9(3)(a);

(b) has been certified to be medically fit

- (i) to dive, in accordance with paragraph 53(b), or
- (ii) to supervise by a medical doctor who has examined the person not more than 12 months prior to the date on which the diving operation is to be conducted and who has recorded the results of the examination on a medical examination record in the form set out in Schedule V, or another form acceptable to the Minister, and in a diving supervisor's medical certificate in that person's supervisor's logbook, referred to in section 51;

(c) holds a valid diving supervisor's certificate issued pursuant to section 28, 30, 32 or 71, or a valid document that is

- (i) issued by a country other than Canada on the basis of training and experience that are equivalent to the training and experience required of a person to obtain a certificate pursuant to section 28, 30 or 32, and
- (ii) acceptable to the Minister; and

(d) has satisfied the diving contractor who conducts the diving operation that

- (i) the person has sufficient diving and supervisory experience and adequate knowledge in the use of the diving plant and equipment to be used in the diving operation, or a similar type of diving plant and equipment, and the breathing mixture to be used in the diving operation, and is familiar with the

relevant provisions of the procedures manual referred to in paragraph 4(4)(a) and the contingency plan referred to in paragraph 4(4)(i) to be used in the diving operation, and

- (ii) the person's involvement in the diving operation is in no way contrary to any restriction, pursuant to section 35, in that person's supervisor's certificate or attached to that person's document referred to in paragraph (c).

CATEGORY I DIVING SUPERVISOR'S CERTIFICATE

28. (1) The Minister may, on application, issue a category I diving supervisor's certificate that is valid for one year to a person who

- (a) has
 - (i) been, for at least three years, the holder of a category I diving certificate issued pursuant to section 54 or 71, or a document that is
 - (A) issued by a country other than Canada on the basis of training and experience that are equivalent to the training and experience required of a person to obtain a certificate pursuant to section 54, and
 - (B) acceptable to the Minister,
 - (ii) been, during the 12 months preceding the application, an assistant diving supervisor for at least 16 category I dives and has supervised at least two real or mock incidents involving decompression sickness,
 - (iii) submitted to the Minister a letter of recommendation that is in the form set out in Schedule VI and is signed by a diving contractor or operator and by a diving supervisor, and
 - (iv) passed a test acceptable to the Minister for a category I diving supervisor's certificate;
- (b) held a category I diving supervisor's certificate that was issued pursuant to this subsection but is no longer valid because it was not renewed pursuant to subsection (2) and who meets the requirements of subparagraphs (a)(ii) and (iii); or
- (c) until December 31, 1990, has satisfied the Minister that the person's training and experience are equivalent to the training and experience required of a person to obtain a certificate pursuant to paragraph (a).

(2) The Minister may, on application by the holder of a category I diving supervisor's certificate issued pursuant to subsection (1), renew the certificate for a period of one year where the holder of that certificate has supervised at least 12 category I dives and at least two real or mock incidents involving decompression sickness during the 12 months preceding the application.

SUPERVISION OF A CATEGORY II DIVING OPERATION

29. No person shall supervise a category II diving operation unless the person

- (a) has been appointed in writing pursuant to paragraph 9(3)(b);
- (b) meets the criteria set out in paragraphs 27(b) and (d); and
- (c) holds a valid diving supervisor's certificate issued pursuant to section 30, 32 or 71, or a valid document that is
 - (i) issued by a country other than Canada on the basis of training and experience that are equivalent to the training and experience required of a person to obtain a certificate pursuant to section 30 or 32, and
 - (ii) acceptable to the Minister.

CATEGORY II DIVING SUPERVISOR'S CERTIFICATE

30. (1) The Minister may, on application, issue a category II diving supervisor's certificate that is valid for one year to a person who

- (a) has
 - (i) been, for at least two years, the holder of a category II diving certificate issued pursuant to section 56 or 71, or a document that is
 - (A) issued by a country other than Canada on the basis of training and experience that are equivalent to the training and experience required of a person to obtain a certificate pursuant to section 56, and
 - (B) acceptable to the Minister,
 - (ii) been, during the 12 months preceding the application, an assistant diving supervisor for at least six category II dives and 10 category I dives and has supervised at least two real or mock incidents involving decompression sickness,
 - (iii) submitted to the Minister a letter of recommendation that is in the form set out in Schedule VI and is signed by a diving contractor or operator and by a diving supervisor who holds a category II or III diving supervisor's certificate, and
 - (iv) passed a test acceptable to the Minister for a category II diving supervisor's certificate;
- (b) held a category II diving supervisor's certificate that was issued pursuant to this subsection but is no longer valid because it was not renewed pursuant to subsection (2) and who meets the requirements of subparagraphs (a)(ii) and (iii); or
- (c) until December 31, 1990, has satisfied the Minister that the person's training and experience are equivalent to the training and experience required of a person to obtain a certificate pursuant to paragraph (a).

(2) The Minister may, on application by the holder of a category II diving supervisor's certificate issued pursuant to subsection (1), renew the certificate for a period of one year where the holder of that certificate has supervised at least 12 dives, of which at least six were category II dives, and has supervised at least two real or mock incidents involving decompression sickness during the 12 months preceding the application.

SUPERVISION OF A CATEGORY III DIVING OPERATION

31. No person shall supervise a category III diving operation unless the person

- (a) has been appointed in writing pursuant to paragraph 9(3)(c);
- (b) meets the criteria set out in paragraphs 27(b) and (d); and
- (c) holds a valid category III diving supervisor's certificate issued pursuant to section 32 or 71, or a valid document that is
 - (i) issued by a country other than Canada on the basis of training and experience that is equivalent to the training and experience required of a person to obtain a certificate pursuant to section 32, and
 - (ii) acceptable to the Minister.

CATEGORY III DIVING SUPERVISOR'S CERTIFICATE

32. (1) The Minister may, on application, issue a category III diving supervisor's certificate that is valid for one year to a person who

- (a) has
 - (i) been, for at least two years, the holder of a category III diving certificate issued pursuant to section 58 or 71, or a document that is

- (A) issued by a country other than Canada on the basis of training and experience that are equivalent to the training and experience required of a person to obtain a certificate pursuant to section 58, and
- (B) acceptable to the Minister,
- (ii) been, during the 12 months preceding the application, an assistant diving supervisor for at least 16 dives of which at least two were saturation dives and six were category II dives and has supervised at least two real or mock incidents involving decompression sickness,
- (iii) submitted to the Minister a letter of recommendation that is in the form set out in Schedule VI and is signed by a diving contractor or operator and by two diving supervisors each of whom holds a category III diving supervisor's certificate, and
- (iv) passed a test acceptable to the Minister for a category III diving supervisor's certificate;
- (b) held a category III diving supervisor's certificate that was issued pursuant to this subsection but is no longer valid because it was not renewed pursuant to subsection (2) and who meets the requirements of subparagraphs (a)(ii) and (iii); or
- (c) until December 31, 1990, has satisfied the Minister that the person's training and experience are equivalent to the training and experience required of a person to obtain a certificate pursuant to paragraph (a).

(2) The Minister may, on application by the holder of a category III diving supervisor's certificate issued pursuant to subsection (1), renew the certificate for a period of one year where the holder of that certificate has supervised at least 12 dives of which at least one was a saturation dive and at least six were category II dives and has supervised at least two real or mock incidents involving decompression sickness during the 12 months preceding the application.

SUPERVISION OF AN ADS DIVING OPERATION

33. No person shall supervise an ADS diving operation unless the person

(a) has been appointed in writing pursuant to paragraph 9(3)(d);

(b) meets the criteria set out in paragraph 27(b) and subparagraph 27(d)(ii);

(c) has satisfied the diving contractor who conducts the diving operation that the person has sufficient pilot and ADS supervisory experience and adequate knowledge in the use of the type of ADS to be used in the diving operation and is familiar with the relevant provisions of the procedures manual referred to in paragraph 4(4)(a) and the contingency plan referred to in paragraph 4(4)(i) to be used in the diving operation; and

(d) holds a valid ADS supervisor's certificate issued pursuant to section 34 or 71, or a valid document that is

- (i) issued by a country other than Canada on the basis of training and experience that are equivalent to the training and experience required of a person to obtain a certificate pursuant to section 34, and
- (ii) acceptable to the Minister.

ADS SUPERVISOR'S CERTIFICATE

34. (1) The Minister may, on application, issue an ADS supervisor's certificate that is valid for one year to a person who

- (a) has
 - (i) been, for at least three years, the holder of a pilot's certificate issued pursuant to section 65 or 71, or a document that is

- (A) issued by a country other than Canada on the basis of training and experience that is equivalent to the training and experience required of a person to obtain a certificate pursuant to section 65, and
- (B) acceptable to the Minister,
- (ii) made at least 20 ADS dives with a total bottom time of at least 80 hours, and
- (iii) submitted to the Minister a letter of recommendation that is signed by a diving contractor or operator and by an ADS supervisor and that is acceptable to the Minister;
- (b) held an ADS supervisor's certificate that was issued pursuant to this subsection but is no longer valid because it was not renewed pursuant to subsection (2) and has supervised at least 10 ADS dives with a total bottom time of at least 25 hours during the 12 months preceding the application; or
- (c) until December 31, 1990, has satisfied the Minister that the person's training and experience are equivalent to the training and experience required of a person to obtain a certificate pursuant to paragraph (a).

(2) The Minister may, on application by the holder of an ADS supervisor's certificate issued pursuant to subsection (1), renew the certificate for a period of one year where the holder of the certificate has supervised at least six ADS dives with a total bottom time of at least 20 hours during the 12 months preceding the application.

RESTRICTIONS RESPECTING SUPERVISOR'S CERTIFICATE AND DOCUMENT

35. (1) The Minister may insert in a supervisor's certificate issued pursuant to section 28, 30, 32, 34 or 71, or attach to a document referred to in subparagraph 28(1)(a)(i), 30(1)(a)(i), 32(1)(a)(i) or 34(1)(a)(i), restrictions with respect to the supervision of a diving operation by the holders of the certificate or the document where the Minister considers such restrictions necessary for safety reasons.

(2) Where the Minister inserts a restriction in a certificate or attaches a restriction to a document, pursuant to subsection (1), the Minister shall give the holder of the certificate or the document, as the case may be, an opportunity to show cause why the restriction should not be so inserted or attached.

INVALIDATION OF SUPERVISOR'S CERTIFICATE

36. (1) The Minister may invalidate a supervisor's certificate issued pursuant to section 28, 30, 32, 34 or 71 where, in the opinion of the Minister, the holder of the certificate has become incompetent or incapacitated.

(2) Where the Minister proposes to invalidate a supervisor's certificate pursuant to subsection (1), the Minister shall give the holder of the certificate at least 30 days' notice in writing setting out the reasons for the proposed invalidation and shall give the holder an opportunity to show cause why the certificate should not be invalidated.

DUTIES OF SUPERVISORS

37. (1) No diving supervisor shall, in a diving operation supervised by the diving supervisor, permit a person to make

- (a) a category I dive in the diving operation unless the person meets the criteria set out in section 53, 55 or 57;
- (b) a category II dive in the diving operation unless the person meets the criteria set out in section 55 or 57; or
- (c) a category III dive in the diving operation unless the person meets the criteria set out in section 57.

(2) No ADS supervisor shall, in an ADS diving operation supervised by the ADS supervisor, permit a person to make an ADS dive in the diving operation unless the person meets the criteria set out in section 64.

(3) No supervisor shall, in a diving operation under his supervision, permit a person to be involved in the diving operation where the supervisor believes on reasonable grounds that the person is unfit to be involved in that diving operation or that the involvement of that person in the diving operation could compromise the safety of other persons involved in the diving operation.

(4) A diving supervisor shall plan dives in such a manner that the total bottom time of a diver supervised by the supervisor does not exceed, in any 24 hour period,

- (a) in the case of a category I dive
 - (i) five hours at depths of 20 m or less, or
 - (ii) three hours at depths of more than 20 m;
- (b) in the case of a category II dive, three hours; and
- (c) in the case of a category III dive, eight hours.

(5) A diving supervisor shall plan a diving operation in such a manner that, where practicable, a diving bell is used in the diving operation for any dive to a depth of more than 30 m that requires surface decompression.

(6) An ADS supervisor shall ensure that a pilot supervised by the supervisor does not remain underwater, in any 24 hour period, for more than a total of eight hours.

(7) A supervisor shall ensure that, following a dive under his supervision, the diver or pilot who made the dive has an adequate rest period.

38. (1) The supervisor of a diving operation shall be present at the diving station from which the diving operation is controlled at all times during the diving operation or during the period in which the supervisor is on duty, as the case may be, and shall

- (a) directly control the diving operation;
- (b) use, during the total dive time of the diving operation, a sufficient number of trained persons to operate the diving plant and equipment used in that diving operation; and
- (c) follow the relevant provisions of the applicable procedures manual for that diving operation.

(2) Notwithstanding any other provision of these Regulations, the supervisor of a diving operation may, in the case of an emergency, allow or direct the use of diving techniques, equipment and procedures not permitted by these Regulations where that use provides the only available practicable means of ensuring or enhancing the safety of the persons involved in the diving operation.

(3) The supervisor of a diving operation shall interrupt or discontinue the diving operation where

- (a) continuation of the diving operation would or is likely to compromise the safety of any person involved in the diving operation;
- (b) the water currents at the underwater work site of the diving operation are likely to compromise the safety of a diver or pilot involved in the diving operation; or
- (c) combustible material is stored too close for safety to any diving plant and equipment used in the diving operation.

(4) The supervisor of a diving operation that involves the use of a diving submersible shall, where practicable, discontinue the diving operation where the unused stored electrical power of the diving submersible reaches 20 per cent of the electrical power capacity of the diving submersible, excluding the back-up capability referred to in paragraph 14(c).

(5) Where the supervisor of a diving operation wishes to commence or continue the diving operation and the person in charge of the craft or installation from which the diving operation is being conducted considers that the commencement or continuation of the diving operation would compromise the safety of any

person on the craft or installation or the safety of the craft or installation, the decision of the person in charge of the craft or installation respecting the commencement or continuation of the diving operation shall overrule the supervisor's decision.

(6) In the event of an accident, the supervisor of the diving operation shall

- (a) take such measures as are necessary to provide treatment to any person injured in the accident and to ensure the safety of the persons involved in the diving operation;
- (b) interrupt the diving operation or any portion of the diving operation that may have caused or contributed to the accident until the diving operation or portion of the diving operation can be safely resumed;
- (c) deliver the diving operations logbook referred to in paragraph 9(5)(m) to the operator responsible for the diving operation as soon as possible after the accident;
- (d) keep the site of the accident undisturbed until a conservation engineer has completed inspection of the site;
- (e) prepare a written report that contains a description of the accident, a summary of the events that led to the accident and the measures taken following the accident; and
- (f) deliver to the operator responsible for the diving operation the report referred to in paragraph (e).

39. (1) No supervisor shall conduct a diving operation unless

- (a) prior to the commencement of a dive that is part of the diving operation, the supervisor has consulted the person in charge of the craft or installation from which the diving operation will be conducted and any other person whose assistance the supervisor considers necessary for the dive;
- (b) the supervisor has taken into account, in any decision respecting the diving operation, the meteorological data available to the supervisor and the environmental conditions in the area of the proposed dive site;
- (c) protective headgear is available for any diver involved in the diving operation at any time that the diver is at or below the surface of the water and, where practicable, at any time the diver is transported in a skip;
- (d) during any period of darkness or low visibility
 - (i) any diver involved in the diving operation is provided with, and has attached to the diver's person, a lamp or other suitable device that indicates the diver's location, and
 - (ii) where the nature of the diving operation permits, the dive site and the underwater work site of the diving operation is adequately illuminated;
- (e) any standby diver involved in the diving operation has an umbilical at least 3 m longer than the umbilical of the diver for whom the stand-by diver acts as stand-by;
- (f) the divers and pilots involved in the diving operation are protected from any danger or hazards that could be caused by
 - (i) sonar,
 - (ii) devices emitting electromagnetic or ionizing radiation,
 - (iii) the propeller and the manoeuvring unit of any craft from which the diving operation is being conducted and the flows of water created by the propeller and the manoeuvring unit,
 - (iv) the normal movements of a craft referred to in subparagraph (iii) and any movements of the craft caused by unexpected loss of power or stability,
 - (v) any suction or water current encountered in or resulting from the diving operation, and
 - (vi) equipment on a craft or an installation from which the diving operation is being conducted; and

- (g) plans have been made, in the event a craft from which the diving operation is being conducted loses power, to protect and to recover a diver or pilot involved in the diving operation who is in the water.
 - (2) No diving supervisor shall permit a diver supervised by the supervisor to enter the water unless
- (a) the diver
 - (i) is wearing a diving harness complete with a pelvic support and lifting ring and is equipped, where practicable, with a depth indicator capable of being monitored from the surface, and
 - (ii) has a bale-out gas bottle that is independent of the primary supply of breathing mixture to the diver; and
- (b) all impressed current cathodic protection devices situated within a radius of 5 m from the diver's underwater work site are deactivated and the notice referred to in subparagraph 6(1)(g)(ii) is prominently displayed on the controls of those devices, or other equally effective measures are taken to ensure the safety of any diver within a radius of 5 m of any active impressed current cathodic protection devices.

RESTRICTIONS RESPECTING DIVE SITES

40. (1) No diving supervisor shall permit a diver supervised by the supervisor to make a dive that is part of a diving operation from

- (a) a place referred to in paragraph 6(1)(b) that is unsuitable;
- (b) a craft that has insufficient power or stability for the safe conduct of the dive;
- (c) a dive site located more than 2 m above the water unless a suitable skip, diving bell or diving submersible is used to transport the diver through the air-water interface;
- (d) a dynamically positioned craft unless
 - (i) the craft has been operating in the dynamically positioned mode for at least 30 minutes before the diver enters the water,
 - (ii) the range of surge or sway movement of the water at the dive site is less than 80 per cent of the maximum operational capacity limit of the craft,
 - (iii) a skip or a diving bell is positioned as close as possible to the diver's underwater work site,
 - (iv) all reasonable precautions are taken to prevent any umbilical used in the dive from coming into contact with any propeller or manoeuvring unit of the craft,
 - (v) any change of heading or positioning of the craft, at any time a diver involved in the diving operation is in the water, is made only after the diving supervisor has granted permission for the change and the diver has been notified, and
 - (vi) the craft complies with the requirements of section 25; and
- (e) a craft that is under way, except in the case of an emergency.

(2) For the purposes of subsection (1), a craft that is operating in the dynamically positioned mode and that complies with the requirements of section 25 is not considered to be under way.

(3) No supervisor shall conduct a diving operation unless the person in charge of the craft or installation from which the diving operation is to be conducted has been notified of the proposed diving operation.

RESTRICTED USE OF SCUBA

41. No diving supervisor shall use or permit to be used SCUBA in a diving operation supervised by the supervisor except where any other diving technique is impracticable or hazardous to use and unless

- (a) the diving operation is conducted in water that is less than 20 m deep;

- (b) the diving operation can be completed without the need for decompression;
- (c) the diver using SCUBA is connected to a lifeline or, where the use of a lifeline is impracticable,
 - (i) the diver is in contact, visually or orally, with another diver who is in the water, securely connected to a lifeline and assisted by an attendant at the dive site, or
 - (ii) some other effective method of ensuring that diver's safety is provided;
- (d) there is a practical means of communication between the supervisor and the diver using SCUBA and there is a means of oral communication between the supervisor and other personnel involved in the diving operation;
- (e) the diving crew for the duration of the diving operation includes a minimum of one supervisor, one diver, one stand-by diver and as many attendants as the supervisor considers necessary to ensure the safety of the divers involved in the diving operation; and
- (f) all applicable provisions of these Regulations are complied with.

RESTRICTIONS RESPECTING CATEGORY I DIVING OPERATIONS

42. No diving supervisor shall conduct a category I diving operation, other than a diving operation in which SCUBA is used, unless

- (a) a suitable skip is used to transport the divers involved in the diving operation to an underwater work site that is 20 m or more in depth and, where practicable, to an underwater work site that is less than 20 m in depth;
- (b) an umbilical directly from the surface or via a skip is used to supply the appropriate breathing mixture to the divers involved in the dive that is part of the diving operation;
- (c) the supervisor is in oral communication with any divers, stand-by divers and attendants involved in the diving operation at all times during the diving operation;
- (d) the supervisor has a means of monitoring the depth of each diver involved in the diving operation and the pressure of the breathing mixture being supplied to each diver and stand-by diver involved in the dive;
- (e) each diver involved in the dive is securely connected to a lifeline; and
- (f) the diving crew for the duration of the diving operation, includes one diving supervisor, one diver and a minimum of
 - (i) one stand-by diver equipped with an umbilical at least 3 m longer than the umbilical of the diver for whom the stand-by diver acts as stand-by,
 - (ii) one attendant at the dive site of the diving operation, and
 - (iii) as many additional attendants as the supervisor considers necessary to ensure the safety of the divers involved in the diving operation.

RESTRICTIONS RESPECTING CATEGORY II DIVING OPERATIONS

43. No diving supervisor shall conduct a category II diving operation unless

- (a) the requirements referred to in paragraphs 42(c) to (e) are complied with;
- (b) a diving bell or diving submersible is used for any descent or ascent of a diver to or from the underwater work site of the diving operation;
- (c) the diving supervisor has a means of monitoring the internal pressure of any diving bell or surface compression chamber or the compression chamber of any diving submersible used in the diving operation; and

- (d) the diving crew, for the duration of the diving operation, includes one diving supervisor and a minimum of
 - (i) two divers who are in the diving bell or diving submersible used in the diving operation, one of whom is equipped with an umbilical at least 3 m longer than the umbilical of the diver for whom the stand-by diver acts as stand-by,
 - (ii) one additional stand-by diver and one attendant at the dive site of the diving operation, and
 - (iii) as many additional attendants as the supervisor considers necessary to ensure the safety of the divers involved in the diving operation.

RESTRICTIONS RESPECTING CATEGORY III DIVING OPERATIONS

44. (1) No diving supervisor shall, in a saturation dive supervised by the supervisor, permit the total dive time of any diver involved in the dive to exceed 31 days.

(2) No diving supervisor shall conduct a category III diving operation unless the diving crew, for the duration of the dive, includes the persons referred to in paragraph 43(d) and as many additional specialists and life-support technicians as the diving supervisor considers necessary to ensure the safety of the divers involved in the dive.

RESTRICTION RESPECTING DIVING SUPERVISORS

45. No diving supervisor shall make a dive while supervising a diving operation, even in the case of an emergency.

ADDITIONAL DUTIES

46. (1) Where a skip, diving bell, diving submersible or ADS used in a diving operation is being lowered into or raised from the water, the supervisor of the diving operation shall ensure that the skip, diving bell, diving submersible or ADS, as the case may be, is continuously within the supervisor's vision, either directly or by any other means.

(2) Where, in a diving operation, a diving bell is coupled with a surface compression chamber by means of a clamping mechanism, the supervisor of the diving operation shall permit only a person who is familiar with the operational procedures designed for the clamping mechanism to operate that clamping mechanism.

(3) Where, in a diving operation, a person is transferred to or from a diving bell, the supervisor of the diving operation shall ensure that any surface compression chambers used in the diving operation but not used in the transfer are, during the transfer, isolated from the surface compression chambers used in the transfer.

(4) Where a diver involved in a diving operation exhibits any unusual psychological or physiological symptoms or any severe symptoms of decompression sickness, the diving supervisor of the diving operation shall advise the specialized diving doctor referred to in paragraph 4(3)(d) and the operator responsible for that diving operation of those symptoms and shall supervise any therapeutic recompression or decompression of the diver.

(5) A diving supervisor shall take all reasonable precautions to ensure that, except in the event of the evacuation of a diver during a diving operation supervised by the diving supervisor,

- (a) a diver involved in the diving operation who has completed a dive does not fly in an aircraft
 - (i) for 12 hours following a non-decompression dive,
 - (ii) for 24 hours following decompression, or
 - (iii) for such longer period as the diving supervisor considers necessary to ensure that the diver does not suffer decompression sickness; and

- (b) a diver involved in the diving operation who has completed a saturation dive remains under observation in the general area of the decompression chamber for at least 24 hours after decompression or such longer period as is sufficient in the opinion of the diving supervisor to ensure the well-being of the diver.

(6) A diving supervisor shall take all reasonable precautions to ensure that, in the evacuation of a person during a diving operation supervised by the supervisor, a person involved in the diving operation who has completed decompression within the preceding 24 hours does not fly in an aircraft at an altitude greater than is operationally necessary in the circumstances.

DIVING PLANT AND EQUIPMENT

47. (1) No supervisor shall conduct a diving operation unless

- (a) the diving plant and equipment referred to in paragraph 9(5)(h) meets the relevant requirements of sections 12 to 21, is available for use when required and that diving plant and equipment, other than diving plant and equipment intended to be mobile during the diving operation, is, at all times during the diving operation, firmly secured to the craft or installation from which the diving operation is conducted; and
- (b) any electrically operated diving plant and equipment that is used in the diving operation is suitable for the location in which it is to be used and is protected from hazards caused by water and environmental conditions.

(2) No supervisor shall, in a diving operation supervised by the supervisor, use any diving plant and equipment in the diving operation unless

- (a) the appropriate examinations and tests referred to in subsection 11(1) have been carried out on the diving plant and equipment and the certificates related to those examinations and tests have been inserted into or attached to the register referred to in subsection 11(3); and
- (b) the supervisor has, not more than 24 hours before such use,
 - (i) examined the diving plant and equipment in accordance with the relevant provisions of the applicable procedures manual and found it to be in good working order, and
 - (ii) where appropriate, in addition to the examination referred to in subparagraph (i), tested for leaks any pump, compressor, cylinder or pipeline used in the diving operation to convey breathing mixture and found it free from leaks.

(3) No diving supervisor shall conduct a dive unless a two-compartment compression chamber

- (a) that has been approved in accordance with section 5 for the diving program of which the dive is a part, to be used at a pressure that is not less than six atmospheres absolute and, where the maximum working pressure that may be encountered during the dive is greater than six atmospheres absolute, at the maximum working pressure plus one atmosphere, and
- (b) that is suitable for the dive

is located in a readily accessible place on board the craft or installation from which the dive is conducted, except where the dive is conducted at a depth of 10 m or less, in which case the compression chamber may be located within one hour's travelling time from the dive site.

OXYGEN SUPPLY SYSTEMS AND BREATHING MIXTURE SUPPLY SYSTEMS

48. (1) No supervisor shall conduct a diving operation in which

- (a) an oxygen supply system is used unless the oxygen supply system meets the requirements set out in section 19;
- (b) a breathing mixture supply system is used unless the breathing mixture supply system meets the requirements set out in sections 20 and 21; and

- (c) an analyser is used to determine the relative levels of oxygen and carbon dioxide during any dive that is part of the diving operation unless the analyser is recalibrated in accordance with the manufacturer's instructions for that analyser prior to the dive.

(2) Where an analyser is used continuously in a diving operation to determine the relative levels of oxygen and carbon dioxide during any dive that is part of the diving operation, the supervisor of the dive shall ensure that the analyser is recalibrated in accordance with the manufacturer's instructions for that analyser, where practicable, every two hours.

(3) No diving supervisor shall, in a diving operation supervised by the supervisor, use or permit to be used an on-line gas blender or a diver's gas recovery system in the diving operation unless throughout the period that the blender or the diver's gas recovery system is in use the requirements of section 21 are complied with.

BREATHING MIXTURE

49. (1) No supervisor shall commence or continue a diving operation unless

- (a) the total quantity of appropriate breathing mixture that is available at any time during the diving operation consists of the quantities set out in section 22;
- (b) the purity of the breathing mixture is of an acceptable standard; and
- (c) the quantities of breathing mixture referred to in subparagraphs 22(1)(a)(ii) and (iii) are available for immediate use at a flow rate, temperature and pressure that are safe for the user.

(2) No supervisor shall permit a diver supervised by the supervisor to make a dive unless

- (a) the total quantity of appropriate breathing mixture, including the reserve supply,
 - (i) carried by the diver is sufficient to enable that diver to reach a skip, diving bell or diving submersible used in connection with the dive, a reserve supply referred to in subparagraph 22(1)(a)(ii) or the surface, and
 - (ii) available to the diver's stand-by diver for immediate use consists of an adequate quantity to enable the stand-by diver to reach the diver and to enable the stand-by diver and the diver
 - (A) to carry out appropriate decompression procedures and return to the surface, or
 - (B) to return to the skip, diving bell or diving submersible used in connection with the dive and to carry out appropriate decompression procedures either in that skip, diving bell or diving submersible, as the case may be, or at the surface; and
- (b) the supervisor has analysed the breathing mixture for the accuracy of its oxygen content immediately prior to the dive.

(3) No supervisor shall, in a diving operation supervised by the supervisor, use or permit to be used

- (a) compressed air as a breathing mixture at water depths greater than 50 m or at pressures that are equivalent to the pressures of water depths greater than 50 m except in the case of a category III dive; or
- (b) pure oxygen as a breathing mixture except for decompression or therapeutic purposes.

(4) A supervisor shall protect any breathing mixture to be used in a diving operation supervised by the supervisor from any likelihood of contamination.

(5) Where a diving supervisor becomes aware of any oil or other contaminant in waters in which a diving operation supervised by the supervisor is being conducted, that supervisor shall take all necessary steps to avoid any contamination of any diver in the water and of the ambient atmosphere in any compression chamber used in the diving operation.

DIVING OPERATIONS LOGBOOKS

50. (1) A supervisor shall enter in the diving operations logbook referred to in paragraph 9(5)(m), for each diving operation or portion of a diving operation supervised by the supervisor,

- (a) the date and the time the diving operation was commenced and terminated including any time during which the diving operation was interrupted, or the date and the time at which the supervisor began the supervision and the time at which that supervision ended;
- (b) the name of the diving contractor, if any, who conducted the diving operation;
- (c) the name of the operator or the operator's representative responsible for the diving operation;
- (d) the name or other designation and the location of the craft or installation from which, or other dive site at which, the diving operation was conducted;
- (e) the identification number of any dive supervised during the diving operation or during the period of supervision referred to in paragraph (a);
- (f) the name of the supervisor, the names of all other persons involved in the diving operation including those who operated any diving plant and equipment used in the diving operation, the names of the persons consulted pursuant to paragraph 39(1)(a) and the names of any other persons consulted in respect of the diving operation and the positions or titles of all the persons named;
- (g) the procedures followed during the diving operation;
- (h) the decompression table and the schedule in that decompression table that were used in the diving operation;
- (i) the time at which any diver involved in the diving operation and any skip, diving bell, diving submersible or ADS used in the diving operation left the surface and returned to the surface;
- (j) the maximum depth, bottom time, dive time and total dive time for each dive conducted during the period of supervision referred to in paragraph (a);
- (k) the type of diving plant and equipment and the type of breathing mixture used in the diving operation;
- (l) the type of discomfort, injury or illness, including decompression sickness, suffered by any person involved in the diving operation;
- (m) the particulars of any environmental conditions that affected or might have affected the diving operation; and
- (n) any other factor relevant to the safety or health of any person involved in the diving operation.

(2) A supervisor shall, after completion of an entry in the diving operations logbook in accordance with subsection (1), immediately sign the entry and request the operator or the operator's representative responsible for the diving operation to countersign the entry as soon as possible.

(3) No person shall make any alteration to an entry in a diving operations logbook referred to in subsection (1) unless the alteration is initialled by the supervisor who made the entry and by the person who countersigned the entry.

(4) The supervisor of a diving operation shall produce, on request, the diving operations logbook for the diving operation for inspection by a conservation engineer pursuant to paragraph 43(b) of the Act.

(5) At the time there is no space for further entries in a diving operations logbook for a diving operation, or at the time the diving operation is completed, whichever occurs first, the supervisor who made the last entry in the logbook shall deliver the logbook to the diving contractor who conducted the diving operation, but, in the event of an accident in connection with the diving operation, the supervisor on duty at the time of the accident shall deliver the logbook to the operator responsible for the diving operation as soon as possible after the accident.

SUPERVISOR'S LOGBOOKS

51. (1) A supervisor shall keep a logbook that is permanently bound, has

■ numbered pages and contains the name and signature of the supervisor and a photograph that is a likeness of the supervisor.

■ (2) A supervisor shall, as soon as possible after supervision of a dive or after a period of supervision of a portion of a dive, enter in the logbook referred to in subsection (1), for each dive or portion of a dive supervised by the supervisor,

- (a) the date of the dive;
- (b) the name of the diving contractor, if any, who conducted the dive;
- (c) the name of the operator or the operator's representative responsible for the diving operation;
- (d) the name or other designation and location of the craft or installation from which, or other dive site at which, the dive was conducted;
- (e) the dive identification number referred to in paragraph 50(1)(e);
- (f) the name of each diver or pilot supervised;
- (g) the maximum depth, bottom time and dive time of the dive;
- (h) the decompression table and the schedule in that decompression table that were used in the dive;
- (i) details of any medical care or advice given and the type of therapeutic treatment used, if any;
- (j) any emergency in connection with the dive; and
- (k) any other factor relevant to the safety or health of any person involved in the dive.

■ (3) A supervisor shall, after completion of an entry in the supervisor's logbook in accordance with subsection (2), immediately sign the entry and request the operator or the operator's representative responsible for the dive to countersign the entry as soon as possible.

■ (4) No person shall make any alteration to an entry in a supervisor's logbook referred to in subsection (1) unless the alteration is initialled by the supervisor and by the person who countersigned the entry.

■ (5) A supervisor shall produce, on request, the supervisor's logbook referred to in subsection (1) for inspection by

- (a) a conservation engineer pursuant to paragraph 43(b) of the Act; and
- (b) the diving doctor who examines the supervisor for the purposes of these Regulations, at the time of the examination.

■ (6) A supervisor shall keep in the supervisor's logbook referred to in subsection (1)

- (a) the supervisor's diving supervisor's certificate or ADS supervisor's certificate;
- (b) the supervisor's written appointment as a supervisor pursuant to subsection 9(3);
- (c) any certificates or other evidence of qualification in addition to those referred to in paragraph (a); and
- (d) any certificates or other evidence of medical examination received from a diving doctor.

■ (7) A supervisor shall retain the supervisor's logbook referred to in subsection (1) for a period of not less than two years after the day of the last entry made in it.

KEEPING OF RECORDS

52. (1) Where a person involved in a diving operation is in a compression chamber, the supervisor of the diving operation shall keep a record or ensure that a record is kept, at regular intervals of not more than 30 minutes, of the time and the depth gauge readings and of the main components of the atmosphere in the compression chamber, including

- (a) the oxygen and carbon dioxide; and
- (b) the temperature and humidity.

(2) The supervisor of a diving operation shall keep a record of

- (a) the results of any analyses of any breathing mixture used,
- (b) any scheduled and unscheduled maintenance performed on any component of the diving plant and equipment used, and
- (c) the results of any readings taken pursuant to subsection (1),

and shall keep a copy of any certifications and inspections carried out on the diving plant and equipment used.

(3) On completion of a diving operation, the supervisor of the diving operation shall deliver the records and copies kept pursuant to subsection (2) to the diving contractor who conducted the diving operation.

(4) The supervisor of a diving operation shall make a tape recording of all communications between the divers or the pilots involved in a dive that is part of the diving operation and the supervisor during the pre-dive system check and during the dive and shall retain the tape recording for a minimum of 48 hours after the completion of the diving operation.

PART VI

DIVERS

CATEGORY I DIVES

53. No person shall make a category I dive in a diving operation unless the person

- (a) is 18 years of age or older;
- (b) has been certified to be medically fit to dive by a diving doctor who has
 - (i) inspected the person's diver's logbook referred to in section 63,
 - (ii) examined the person not more than 12 months prior to the period during which the diving operation is to be conducted, and
 - (iii) recorded the results of the examination including, in the case of a person 35 years of age or older, the results of a stress ECG performance test on a treadmill or a bicycle, on a medical examination record in the form set out in Schedule VII or in another form acceptable to the Minister, and on a diver's medical certificate in the person's diver's logbook;
- (c) has delivered a copy of the diver's medical certificate referred to in paragraph (b) to the diving contractor who conducts the diving operation;
- (d) holds
 - (i) a valid category I diving certificate issued pursuant to section 54 or 71,
 - (ii) during the first year in which the person makes category I dives in a diving operation, a valid document that is
 - (A) issued by a country other than Canada on the basis of training and experience that are equivalent to the training and experience referred to in paragraph 54(1)(a), and

- (B) acceptable to the Minister,
- (iii) a valid category II diving certificate issued pursuant to section 56 or 71 or a valid document referred to in paragraph 55(1)(b), or
- (iv) a valid category III diving certificate issued pursuant to section 58 or 71 or a valid document referred to in paragraph 57(1)(b); and
- (e) has satisfied the supervisor of the diving operation that
 - (i) the person is capable of using, and has sufficient experience in the use of, the type of diving plant and equipment and breathing mixture to be used in the diving operation and is familiar with the relevant provisions of the procedures manual referred to in paragraph 4(4)(a) and the contingency plan referred to in paragraph 4(4)(i) to be followed in the diving operation, and
 - (ii) the person's involvement in the diving operation is in no way contrary to any restriction
 - (A) inserted in that person's diving certificate or attached to that person's document referred to in paragraph (d) pursuant to section 59, or
 - (B) inserted in that person's diver's medical certificate pursuant to section 60.

CATEGORY I DIVING CERTIFICATES

54. (1) The Minister may, on application, issue a category I diving certificate that is valid for one year to a person who has attained a standard of competence in category I diving that is acceptable to the Minister and who

- (a) holds a first-aid certificate acceptable to the Minister and has
 - (i) successfully completed, at a school, institution or company acceptable to the Minister, training in the theoretical and practical aspects of diving appropriate to category I diving, including
 - (A) the use of air as a breathing mixture,
 - (B) surface-oriented diving techniques and operational procedures,
 - (C) diving techniques and operational procedures for use with SCUBA,
 - (D) the use and operation of any diving plant and equipment, including hand-held tools,
 - (E) the use of communications systems,
 - (F) the use of decompression tables,
 - (G) emergency procedures, including hyperbaric first-aid techniques and the operation of surface compression chambers, and
 - (H) a thorough study of these Regulations, and
 - (ii) made at least 50 dives in various environmental conditions and locations and for various purposes with a bottom time totalling at least 50 hours, including
 - (A) at least 40 dives to depths of up to 20 m with a bottom time totalling at least 43 hours, of which at least 10 were dives to depths of between 15 m and 20 m with a bottom time totalling at least seven hours, and
 - (B) at least 10 dives to depths of between 20 m and 50 m with a bottom time totalling at least seven hours, of which at least three hours were at depths of between 40 m and 50 m and at least one hour was at a depth of at least 50 m;
- (b) held a category I diving certificate that was issued pursuant to this subsection but is no longer valid because it was not renewed pursuant to subsection (2) and who made at least 28 dives with a bottom time totalling at least 24 hours during the 12 months preceding the application;

- (c) until December 31, 1990, has satisfied the Minister that the person's training and experience are equivalent to the training and experience described in paragraph (a); or
- (d) holds a valid document referred to in paragraph 53(d).

(2) The Minister may, on application by the holder of a category I diving certificate issued pursuant to subsection (1), renew the certificate for a period of one year where the holder of the certificate has made at least 24 category I dives with a bottom time totalling at least 20 hours during the 12 months preceding the application.

CATEGORY II DIVES

55. (1) Subject to subsection (2), no person shall make a category II dive in a diving operation unless the person

- (a) meets the criteria set out in paragraphs 53(a) to (c) and (e); and
- (b) holds
 - (i) a valid category II diving certificate issued pursuant to section 56 or 71,
 - (ii) during the first year in which the person makes a category II dive in a diving operation, a valid document that is
 - (A) issued by a country other than Canada on the basis of training and experience that are equivalent to the training and experience referred to in paragraph 56(1)(a), and
 - (B) acceptable to the Minister, or
 - (iii) a valid category III diving certificate issued pursuant to section 58 or 71 or a valid document referred to in paragraph 57(1)(b).

(2) A diver who holds a category I diving certificate may make a category II dive for training purposes in a diving operation where

- (a) the diver is employed in a diving program on a full-time basis to make category I dives;
- (b) the dive is authorized as a training dive by the operator or the operator's representative responsible for the diving operation and the person in charge of the craft or installation from which the dive will be conducted; and
- (c) the diver makes the dive under the close supervision of a diver who holds a category II or category III diving certificate.

CATEGORY II DIVING CERTIFICATES

56. (1) The Minister may, on application, issue a category II diving certificate that is valid for one year to a person who has attained a standard of competence in category II diving that is acceptable to the Minister and who

- (a) has
 - (i) successfully completed, at a school, institution or company acceptable to the Minister, training in the theoretical and practical aspects of diving appropriate to category II diving, including
 - (A) the use of mixed gas as a breathing mixture,
 - (B) mixed gas diving techniques and operational procedures,
 - (C) the use and operation of any diving plant and equipment,
 - (D) any type of underwater work generally done by a diver,
 - (E) the use of communications systems,

- (F) emergency procedures, including hyperbaric first-aid techniques and the operation of compression chambers, and
 - (G) a thorough study of these Regulations, and
- (ii) been employed to make category I dives for at least the 12 months preceding the application and has made at least 60 dives in a diving bell or diving submersible with a bottom time totalling at least 20 hours, including at least 30 lock-out dives of which four were to a depth of more than 50 m, two were to a depth of more than 80 m and one was to a depth of 100 m or more, with a bottom time totalling at least 30 minutes per lock-out dive;
- (b) held a category II diving certificate that was issued pursuant to this subsection but is no longer valid because it was not renewed pursuant to subsection (2) and who made at least 28 dives with a bottom time totalling at least 24 hours of which at least 10 dives were category II dives with a bottom time totalling at least 10 hours during the 12 months preceding the application;
- (c) until December 31, 1990, has satisfied the Minister that the person's training and experience are equivalent to the training and experience described in paragraph (a); or
- (d) holds a valid document referred to in paragraph 55(1)(b).

(2) The Minister may, on application by the holder of a category II diving certificate issued pursuant to subsection (1), renew the certificate for a period of one year where the holder of the certificate has made at least 24 dives with a bottom time totalling at least 20 hours, including at least eight category II dives with a bottom time totalling at least eight hours during the 12 months preceding the application.

CATEGORY III DIVES

57. (1) Subject to subsection (2), no person shall make a category III dive in a diving operation unless the person

- (a) meets the criteria set out in paragraphs 53(a) to (c) and (e); and
- (b) holds a valid category III diving certificate issued pursuant to section 58 or 71 or, during the first year in which the person makes a category III dive in a diving operation, a valid document that is
 - (i) issued by a country other than Canada on the basis of training and experience that are equivalent to the training and experience described in paragraph 58(1)(a), and
 - (ii) acceptable to the Minister.

(2) A diver who holds a category II diving certificate may make a category III dive for training purposes in a diving operation where

- (a) the diver is employed in a diving program on a full-time basis to make category II dives;
- (b) the dive is authorized as a training dive by the operator or the operator's representative responsible for the diving operation and the person in charge of the craft or installation from which the dive will be conducted; and
- (c) the diver makes the dive under the close supervision of a diver who holds a category III diving certificate.

CATEGORY III DIVING CERTIFICATES

58. (1) The Minister may, on application, issue a category III diving certificate that is valid for one year to a person who has attained a standard of competence in category III diving that is acceptable to the Minister and who

- (a) has
 - (i) successfully completed, at a school, institution or company acceptable to the Minister, training in the theoretical and practical aspects of diving appropriate to category III diving, including

- (A) at least one saturation dive to a depth of not less than 75 m with at least two lock-out dives with a bottom time totalling at least 30 minutes per lock-out dive,
- (B) saturation diving techniques and operational procedures,
- (C) the use and operation of any diving plant and equipment,
- (D) any type of underwater work generally done by a diver,
- (E) emergency procedures relevant to saturation diving, including hyperbaric first-aid techniques and the operation of compression chambers, and
- (F) a thorough study of these Regulations, and
- (ii) been employed to make category II dives for at least the two years preceding the application and has made at least 24 category II dives;
- (b) held a category III diving certificate that was issued pursuant to this subsection but is no longer valid because it was not renewed pursuant to subsection (2) and who made at least 28 dives with a bottom time totalling at least 32 hours, including at least 10 category II dives with a bottom time totalling at least 10 hours and at least one saturation dive during the 12 months preceding the application;
- (c) until December 31, 1990, has satisfied the Minister that the person's training and experience are equivalent to the training and experience referred to in paragraph (a); or
- (d) holds a valid document referred to in paragraph 57(1)(b).

(2) The Minister may, on application by the holder of a category III diving certificate issued pursuant to subsection (1), renew the certificate for a period of one year where the holder of that certificate has made at least 24 dives with a bottom time totalling at least 24 hours, including at least eight category II dives from a diving bell or diving submersible with a bottom time totalling at least eight hours and at least one saturation dive during the 12 months preceding the application.

RESTRICTIONS RESPECTING DIVING CERTIFICATES AND DOCUMENTS

59. (1) The Minister may insert in a diving certificate issued pursuant to section 54, 56, 58 or 71, or attach to a document referred to in paragraph 53(d), 55(1)(b) or 57(1)(b), restrictions on diving by the holder of the certificate or document where the Minister considers those restrictions necessary for safety reasons.

(2) Where the Minister inserts a restriction in a certificate or attaches a restriction to a document pursuant to subsection (1), the Minister shall give the holder of the certificate or document, an opportunity to show cause why that restriction should not be inserted or attached.

RESTRICTIONS RESPECTING MEDICAL CERTIFICATES

60. (1) A diving doctor who examines a diver for the purposes of paragraph 53(b) or section 71 may insert in the diver's medical certificate medical restrictions on diving by the holder of the medical certificate where the diving doctor considers those restrictions necessary for safety reasons.

(2) Where a diving doctor inserts medical restrictions in a diver's medical certificate pursuant to subsection (1) or certifies in a medical certificate in a diver's logbook that the diver is medically unfit to dive, the Minister shall, on application by the diver within one month after the insertion or certification by the diving doctor, review that certificate and the diver's medical examination record related to the certificate with one or more specialized diving doctors.

DIVER'S DUTIES

62. (1) Subject to subsection (2), no diver shall make a dive in a diving operation unless
- (a) prior to the dive, the diver has
 - (i) checked the diver's personal diving equipment and is satisfied that the equipment is in good working order, and

- (ii) reported to the supervisor of the diving operation any remedies, treatments, pharmaceuticals, intoxicants or drugs taken by the diver within the 48 hours preceding the dive, any injury or illness experienced by that diver since the diver's most recent dive and any restrictions imposed pursuant to section 60 by a diving doctor as a result of the diving doctor's examination of that diver after an injury or illness;
- (b) in the case of a diver who has experienced an injury or illness other than decompression sickness since the diver's most recent dive, the diver has received approval for further diving from a diving doctor or a hyperbaric first-aid technician who consulted with a diving doctor concerning the injury or illness;
- (c) in the case of a diver who has experienced decompression sickness type I, at least two days have elapsed since the diver successfully completed recompression therapy;
- (d) in the case of a diver who has experienced decompression sickness type II, at least five days have elapsed since the diver successfully completed recompression therapy and the diver has received approval for further diving from a diving doctor; and
- (e) in the case of a diver who has experienced decompression sickness type I in two consecutive dives, the diver has received approval for further diving from a diving doctor.

(2) No diver shall make a saturation dive unless

- (a) in the case of a diver whose most recent dive was a saturation dive of 14 days' duration or less, at least 14 days have elapsed since the diver completed decompression; and
- (b) in the case of a diver whose most recent dive was a saturation dive of more than 14 days' duration, at least 28 days have elapsed since the diver completed decompression.

(3) Where a diver who is employed in a diving operation believes the diver is unfit or unable to dive at any time during that employment, the diver shall so inform the supervisor of the diving operation and shall give the reason for that belief.

(4) Where a diver becomes aware of any oil or other contaminant in waters in which a diving operation is being conducted, the diver shall forthwith inform the supervisor of the diving operation of the contaminant.

DIVER'S LOGBOOKS

63. (1) A diver shall keep a logbook that is permanently bound, has numbered pages and contains the name and signature of the diver and a photograph that is a likeness of the diver.

(2) A diver shall, as soon as possible after making a dive, enter in the diver's logbook referred to in subsection (1), for each dive made by the diver,

- (a) the date of the dive;
- (b) the name of the diving contractor, if any, who conducted the dive;
- (c) the name of the operator or the operator's representative responsible for the dive;
- (d) the name or other designation and the location of the craft or installation from which, or other dive site at which, the dive was conducted;
- (e) the dive identification number referred to in paragraph 50(1)(e);
- (f) the name of the supervisor of the dive;
- (g) the maximum depth, the bottom time and the total dive time of the dive;
- (h) the decompression table and the schedule in that decompression table that were used in the dive;
- (i) the decompression procedures followed by the diver;
- (j) the type of personal diving equipment used by the diver;

- (k) any injury suffered by the diver during the dive;
- (l) the work performed by the diver;
- (m) a description of any discomfort or illness, including decompression sickness, suffered by the diver; and
- (n) any other factor relevant to the safety or health of the diver.

(3) A diver shall, after completion of an entry in the diver's logbook in accordance with subsection (2), immediately sign the entry and request the supervisor of the dive to countersign the entry as soon as possible.

(4) No person shall make any alteration to an entry in a diver's logbook referred to in subsection (1) unless the alteration is initialled by the diver and by the supervisor who countersigned the entry.

(5) A diver shall produce, on request, the diver's logbook referred to in subsection (1) for inspection by

- (a) a conservation engineer pursuant to paragraph 43(b) of the Act; and
- (b) the diving doctor who examines the diver for the purposes of these Regulations, at the time of the examination.

(6) A diver shall keep in the diver's logbook referred to in subsection (1)

- (a) the diver's diving certificate or equivalent document;
- (b) any certificates or other evidence of qualification in addition to those referred to in paragraph (a); and
- (c) any certificates or other evidence of medical examination received from a diving doctor.

(7) A diver shall retain the diver's logbook referred to in subsection (1) for a period of not less than two years after the day of the last entry made in it.

PART VII

PILOTS

ADS DIVES

64. No person shall pilot an ADS in a diving operation unless the person

- (a) is 18 years of age or older;
- (b) has been certified to be medically fit
 - (i) to dive, in accordance with paragraph 53(b), or
 - (ii) to pilot an ADS, by a medical doctor who has examined the person not more than 12 months prior to the date on which the diving operation is to be conducted and who has recorded the results of the examination on a medical examination record in the form set out in Schedule V or in another form acceptable to the Minister and on a pilot's medical certificate in that person's pilot's logbook referred to in section 69;
- (c) has delivered a copy of the medical certificate referred to in paragraph 53(b), or the medical certificate referred to in subparagraph (b)(ii), to the diving contractor who conducts the diving operation;
- (d) holds a valid pilot's certificate issued pursuant to section 65 or 71, or a valid document that is
 - (i) issued by a country other than Canada on the basis of training and experience that are equivalent to the training and experience described in paragraph 65(1)(a), and
 - (ii) acceptable to the Minister; and
- (e) has satisfied the supervisor of the diving operation that

- (i) the person is capable of using, and has sufficient experience in the use of, the type of ADS and associated equipment to be used in the diving operation and is familiar with the relevant provisions of the procedures manual referred to in paragraph 4(4)(a) and the contingency plan referred to in paragraph 4(4)(i) to be used in the diving operation, and
- (ii) the person's involvement in the diving operation is in no way contrary to any restriction
 - (A) inserted in that person's pilot's certificate or attached to that person's document referred to in paragraph (d) pursuant to section 66, or
 - (B) inserted in that person's pilot's medical certificate pursuant to section 60 or 67.

PILOT'S CERTIFICATES

65. (1) The Minister may, on application, issue a pilot's certificate that is valid for one year to a person who has attained a standard of competence in the operation of an ADS that is acceptable to the Minister and who

- (a) has successfully completed at least 40 hours of technical training in the design, construction, use and maintenance of an ADS at a school, institution or company acceptable to the Minister and who has made at least 25 ADS dives under various conditions with a bottom time totalling at least 40 hours;
- (b) held a pilot's certificate that was issued pursuant to this subsection but is no longer valid because it was not renewed pursuant to subsection (2) and who has made at least six ADS dives with a bottom time totalling at least 20 hours to an average depth of at least 20 m during the 12 months preceding the application;
- (c) until December 31, 1990, has satisfied the Minister that the person's training and experience are equivalent to the training and experience described in paragraph (a); or
- (d) holds a valid document referred to in paragraph 64(d).

(2) The Minister may, on application by the holder of a pilot's certificate issued pursuant to subsection (1), renew the certificate for a period of one year where the holder of that certificate has made at least four ADS dives with a dive time totalling at least 16 hours during the 12 months preceding the application.

RESTRICTIONS RESPECTING PILOT'S CERTIFICATES AND DOCUMENTS

66. (1) The Minister may insert in a pilot's certificate issued pursuant to section 65 or 71, or attach to a document referred to in paragraph 64(d), restrictions on the piloting of an ADS by the holder of the certificate or document where the Minister considers those restrictions necessary for safety reasons.

(2) Where the Minister inserts a restriction in a certificate or attaches a restriction to a document pursuant to subsection (1), the Minister shall give the holder of the certificate or document an opportunity to show cause why that restriction should not be so inserted or attached.

RESTRICTIONS RESPECTING MEDICAL CERTIFICATES

67. (1) A medical doctor who examines a pilot for the purposes of subparagraph 64(b)(ii) or section 71 may insert in the pilot's medical certificate medical restrictions on the pilot where the doctor considers those restrictions necessary for safety reasons.

(2) Where a medical doctor inserts medical restrictions in a pilot's medical certificate pursuant to subsection (1) or certifies in a medical certificate in a pilot's logbook that the pilot is medically unfit to pilot an ADS, the Minister shall, on application by the pilot within one month after the insertion or certification by the doctor, review the certificate and the pilot's medical examination record related to the certificate with one or more medical doctors.

INVALIDATION OF PILOT'S CERTIFICATES

68. (1) The Minister may invalidate a pilot's certificate issued pursuant to section 65 or 71 where, in the opinion of the Minister, the holder of the certificate has become incompetent or incapacitated.

(2) Where the Minister proposes to invalidate a pilot's certificate pursuant to subsection (1), the Minister shall give the holder of the certificate at least 30 days' notice in writing setting out the reasons for the proposed invalidation and shall give the holder an opportunity to show cause why the certificate should not be invalidated.

PILOT'S LOGBOOKS

69. (1) A pilot shall keep a logbook that is permanently bound, has numbered pages and contains the name and signature of the pilot and a photograph that is a likeness of the pilot.

(2) A pilot shall, as soon as possible after making a dive, enter in the pilot's logbook referred to in subsection (1), for each dive made by the pilot,

- (a) the date of the dive;
- (b) the name of the diving contractor, if any, who conducted the dive;
- (c) the name of the operator or the operator's representative responsible for the dive;
- (d) the name or other designation and the location of the craft or installation from which, or other dive site at which, the dive was conducted;
- (e) the dive identification number referred to in paragraph 50(1)(e);
- (f) the name of the ADS supervisor who supervised the dive;
- (g) the maximum depth, the bottom time and the total dive time of the dive;
- (h) the work performed by the pilot;
- (i) a description of any discomfort, injury or illness suffered by the pilot; and
- (j) any other factor relevant to the safety or health of the pilot.

(3) A pilot shall, after completion of an entry in the pilot's logbook in accordance with subsection (2), immediately sign the entry and request the ADS supervisor who supervised the dive to countersign the entry as soon as possible.

(4) No person shall make any alteration to an entry in a pilot's logbook referred to in subsection (1) unless the alteration is initialled by the pilot and by the ADS supervisor who countersigned the entry.

(5) A pilot shall produce, on request, the pilot's logbook referred to in subsection (1) for inspection by

- (a) a conservation engineer pursuant to paragraph 43(b) of the Act; and
- (b) the diving doctor or medical doctor who examines the pilot for the purposes of these Regulations, at the time of the examination.

(6) A pilot shall keep in the pilot's logbook referred to in subsection (1)

- (a) the pilot's certificate or equivalent document;
- (b) any certificates or other evidence of qualification in addition to those referred to in paragraph (a); and
- (c) any certificates or other evidence of medical examination received from a diving doctor or medical doctor.

(7) A pilot shall retain the pilot's logbook referred to in subsection (1) for a period of not less than two years after the day of the last entry made in it.

PART VIII
ADDITIONAL PROVISIONS

PERSONS WHO HAVE FIRST-AID OR MEDICAL TRAINING

70. (1) A specialized diving doctor who is involved in a diving operation shall not assume responsibility for any aspect of the operation other than the medical aspect.

(2) A person who has first-aid or medical training and who is employed in a diving operation shall report, without delay, to the supervisor of the diving operation any medical consultation the person had involving a diver or pilot employed in the diving operation and any medical advice or treatment the person provided to the diver or pilot.

PERMANENT CERTIFICATES

71. (1) Where a person holds a certificate issued by the Minister pursuant to section 28, 30, 32, 34, 54, 56, 58 or 65, or holds a valid document that has been accepted by the Minister pursuant to paragraph 27(c), 29(c), 31(c) or 33(d), for at least five years, the Minister may, on application, issue the person a certificate, for the same category as the certificate or document that was held, that is valid, subject to section 36, 61 or 68, for as long as the person is certified to be medically fit in accordance with paragraph 27(b), 53(b) or 64(b).

(2) Where a person satisfies the Minister that, for any period of five years before the coming into force of these Regulations, the person would have qualified for a certificate under these Regulations if these Regulations had been in force during that period, the Minister may, on application received prior to January 1, 1991, issue the person the certificate that the person would have qualified for, that is valid, subject to section 36, 61 or 68, for as long as the person is certified medically fit in accordance with paragraph 27(b), 53(b) or 64(b).

OFFENCES

72. Any contravention of section 6, 7, 9 to 27, 29, 31, 33, 37 to 53, 55, 57, 62 to 64, 69 or 70 is an offence under the Act.

SCHEDULE I

(Paragraph 4(4)(a))

PROCEDURES MANUAL

1. The procedures manual for a diving program shall contain the standard operating procedures to be followed in any diving operation that will be part of the diving program and shall include

- (a) the procedures for any consultations with the person in charge of any craft or installation from which the diving operation is conducted;
- (b) the procedures to be followed by each person involved in a dive that will be part of the diving program, including a diver, stand-by diver, pilot, attendant and supervisor;
- (c) for each depth and each type of dive, the procedures for
 - (i) conducting the dive, taking into account
 - (A) local meteorological and sea-state conditions, and
 - (B) hazards such as strong currents, man-made structures and activities, other than diving, being conducted in the vicinity,
 - (ii) the selection of the appropriate breathing mixture, decompression tables and treatment tables to be used in the dive,
 - (iii) the use, inspection and maintenance of the diving plant and equipment, including communications and signalling equipment, to be used in the dive,

- (iv) the lowering and recovery of a diver and the launching and recovery of any skip, diving bell, diving submersible or ADS to be used in the dive,
 - (v) the completion of the diving operations logbook referred to in paragraph 9(5)(m) and subsection 50(1), including sample entries, and
 - (vi) the making of a decision to commence, continue, interrupt or discontinue the dive, including any conditions to be taken into account in the determination; and
- (d) a sample of the pre-dive checklist to be followed.

SCHEDULE II

(Paragraph 4(4)(i))

EMERGENCY PROCEDURES

1. (1) The contingency plan for a diving program shall contain the emergency procedures to be followed, where circumstances that are likely to endanger a diver or pilot make it impossible and unsafe to follow the procedures contained in the procedures manual for the diving program, such as

- (a) deteriorating environmental conditions;
- (b) unexpected weather or sea-state conditions;
- (c) inability of a craft to maintain itself at the location of a dive site;
- (d) evacuation of a craft or installation;
- (e) evacuation of divers under pressures greater than atmospheric pressure;
- (f) in-water emergency transfers;
- (g) failure of any major component of diving plant or equipment; and
- (h) fouling of equipment below the surface that impairs the ability of a diver or pilot to complete a dive.

(2) The emergency procedures referred to in subsection (1) shall include procedures for

- (a) emergency signalling between divers involved in the diving program and between the divers and their attendants using umbilicals or other suitable methods;
- (b) the provision of stand-by divers;
- (c) the provision of crafts, stand-by boats and any other devices to be used for rescue;
- (d) the provision of first-aid treatment and therapeutic decompression;
- (e) the use of the evacuation, rescue and treatment facilities and devices referred to in section 23 to be used in the diving program;
- (f) contacting the evacuation, rescue and treatment facilities referred to in section 23 and the medical services referred to in paragraphs 24(b) and (d) that will be used in the diving program;
- (g) the operation of the emergency power supply;
- (h) the evacuation of a craft or installation used in the diving program;
- (i) the evacuation of divers under pressures greater than atmospheric pressure; and
- (j) in-water emergency transfers.

SCHEDULE III
(Paragraphs 6(1)(i) and (j))
 DIVING ACCIDENT/INCIDENT REPORT

Name of craft or installation: Operator: _____
 Supervisor: Diving contractor: _____
 Persons involved: Date: _____
 Type of dive: _____
 Purpose of dive: _____
 Personal diving equipment used: _____
 Diving plant and equipment used: _____
 Dive profile: _____
 Depth: Bottom time: _____
 Time left surface: Tables used: _____
 Ascent method: _____
 Ascent rate & time: Time returned to surface: _____
 Name of specialized diving doctor or medical attendant who treated diver or pilot: _____
 Treatment: Name of diver or pilot treated: Treatment table used: _____
 Diver's or pilot's medical condition after treatment: _____
 Number of dives made by diver or pilot in the 24 hours preceding accident/incident: _____
 Gas mixture(s) used: { *(in dive)* } { *(in treatment)* }
 Air temperature: Wind speed: Sea state: _____
 Type of sea bed: Visibility: _____
 Condition of personal equipment after accident/incident: _____
 Personal equipment examined at: { *(Location and date)* } By: { *(Name of examiner)* }
 Summary of accident/incident: { *(Use additional sheets as necessary)* }

 Signature of operator or operator's representative

 Signature of supervisor

SCHEDULE IV
(Paragraph 12(2)(b))

PART I

FIRST AID SUPPLIES FOR A DIVING OPERATION

Column I	Column II	Column III
Item	Supplies	Details
Quantity		
1.	Tourniquets	2
2.	Scissors	Mayo, 7" 1
3.	Shell Dressings	Large 2
4.	Surgical Gloves	Pairs of sizes 8, 9, 10 2 each

Item	Column I Supplies	Column II Details	Column III Quantity
5.	Gauze Roller Bandage	Sterile, 2" and 3"	1 each
6.	Gauze Sponges	Sterile, 4" x 4", pack of 100	1
7.	Adhesive Plaster	Roll	1
8.	Scalpels	Disposable, No. 10 & 11 blades	1 each
9.	Scalpel Blades	No. 10 & 11	2 each
10.	Laryngoscope	Large adult blade, with spare batteries & bulb	1
11.	Mouth Gag		1
12.	Mouth-to-Mouth Resuscitation Tube		2
13.	Oropharyngeal Airways	Sizes 3 & 4	1 each
14.	Suction Apparatus	Non-electric (e.g. Ambu foot operated)	1
15.	Minor Surgical Tray	Ribbon Retractor	1
		Army-Navy Retractor	2
		Rake Retractor, sharp	1
		Rake Retractor, blunt	1
		Lahey	2
		Mosquito	4
		Towel clips	6
		Pack, sterile, containing:	
		Needle driver	2
		Self-retaining retractor, blunt	1
		Allis	2
		Babcock	2
		Sponge forceps	2
		Scissors, straight Mayo	1
		Scissors, curved Mayo	1
		Scissors, curved Metz	1
		Artery (haemostat)	6
		Kockers	2
		Russian forcep	2
		Knife handle No. 3	1
		Knife handle No. 4	1
		Forceps, toothed	2
		Suction	1
16.	Dressing Tray	Sterile, containing:	
		Small cup	1
		Combine pad	1
		Gauze 4" x 4"	6
		Gauze 2" x 2"	10

Item	Column I Supplies	Column II Details	Column III Quantity
		Dressing towel	1
		Artery forceps	2
		Tissue forceps	1
17.	Intravenous-giving sets	e.g. Travenol 2C2027 Blood administration set	4
18.	Intravenous cannulae	Gauges 15, 16 & 14	2 each
19.	Intravenous cannula	Gauge 16, 8", for central venous placement	1
20.	Alcohol injection swabs	e.g. Webcol	24
21.	Trochar cannulae	e.g. Argyle, No. 10, 23 cm	2
22.	Heimlich chest drain valves	e.g. Bard Parker No. 3460	2
23.	Syringes	10 ml	6
24.	Syringes	20 ml	6
25.	Needles, hypodermic	Gauges 23, 21 and 16	6 each
26.	Foley bladder catheter	14 & 16 French gauges	1 each
27.	Urinary drainage bag		1
28.	Endotracheal tubes	Cuffed, 7 mm, 8 mm, 9 mm & 9.5 mm	1 each
29.	Wire introducer	For use with endotracheal tubes	1
30.	Suction catheters		2
31.	Blood tubes (not vacutainers)	Silicone coated, no additive	2
32.	Blood tubes (not vacutainers)	Non-silicone coated, EDTA	2
33.	Resuscitator bag	Laerdal, with 100% O ₂ fitting and fitting for connection to BIBS	1
34.	Xylocaine	1%, without epinephrine, 10 ml	4
35.	Xylocaine gel	Urethral, 2% tube	1
36.	Bridine solution	100 ml, for skin prep	1
37.	Dextran 70 (Macrodex) in saline	500 ml	2
38.	Dextrose 5% Saline	1000 ml, bag of	4
39.	Saline 0.9%	1000 ml, bag of	4
40.	Heparin injections	500 µ/ml, 2 ml vial	1
41.	Diazepam injection	10 mg in 2 ml	6
42.	Benadryl injection	50 mg in 1 ml	6
43.	Furosemide injection	40 mg in 2 ml	6
44.	Dexamethasone injection	4 mg, 10 ml vial	2
45.	Aspirin tablets	324 mg	50
46.	Thermometer, electronic	Thermocouple or thermistor	1
47.	Stethoscope		1
48.	Auriscope	With spare batteries & bulb	1
49.	Reflex hammer		1
50.	Band Aids	Box	1
51.	Anaeroid sphygmomanometer		1

Item	Column I Supplies	Column II Details	Column III Quantity
52.	Flashlight	With spare batteries & bulb	1
53.	Sutures	Silk, 3/0 on curved cutting needle	6
54.	Sutures	Silk, 0/0 on heavy curved needle	6
55.	Sutures	Chromic catgut, 2/0 on curved taper needle	6
56.	Sutures	Chromic catgut, 0/0 on curved taper needle	6
57.	Ties	Silk, 0/0	6
58.	Ties	Silk, 2/0	6
59.	Ties	Silk, 3/0	6

PART II

FIRST AID SUPPLIES TO BE KEPT IN A DIVING BELL OR IN THE COMPRESSION CHAMBER OF A DIVING SUBMERSIBLE

Item	Column I Supplies	Column II Details	Column III Quantity
1.	Tourniquet		1
2.	Mouth-to-Mouth Resuscitation Tube		1
3.	Mouth Gag		1
4.	Oropharyngeal Airways		2
5.	Adhesive Plaster	Roll	1
6.	Band Aids	Assorted sizes, flat	1
7.	Shell Dressings	Large	2
8.	Shell Dressings	Small	2
9.	Scissors, Mayo	7"	1

SCHEDULE V

(Paragraphs 27(b) and 64(b))

SUPERVISOR'S OR PILOT'S MEDICAL EXAMINATION RECORD — PART I

All abnormal findings shall be recorded on the supervisor's or pilot's medical examination record.

Family name: First name(s): Birth date: _____ Sex: M/F

Ht: cm Wt: kg Identifying features: _____

General appearance: _____

HEENT: Normal? Yes/No Normal colour vision? Yes/No Audiometry: Rt. Normal? Yes/No Lt. Normal? Yes/No

Vision: Distant	Dist. with glasses	Near	Near with glasses	Normal visual fields?	Normal fundi?
Right	_____	_____	_____	Yes/No	Yes/No
_____				_____	_____
Left	_____	_____	_____	Yes/No	Yes/No
_____				_____	_____
Both	_____	_____	_____	Yes/No	Yes/No
_____				_____	_____

SKIN: Rash? Yes/No Infection? Yes/No Parasites? Yes/No Lymph glands normal? Yes/No Breasts normal? Yes/No

RESP: Any chest scars or deformity? Yes/No Chest auscultation normal? Yes/No Any adventitious sounds? Yes/No Current chest X-ray normal? Yes/No/Not Done.*

CARDIOVASCULAR: BP: _/_ Pulse: _/_ min. Peripheral pulses and circulation normal? Yes/No Normal apex beat? Yes/No Normal heart sounds? Yes/No Murmurs present? Yes/No ECG normal? Yes/No Exercise tolerance test (eg. Ruffier test) normal? Yes/No

ABDOMEN: Organomegaly? Yes/No Masses present? Yes/No Herniae present? Yes/No Genitourinary system normal? Yes/No Rectal normal? Yes/No

MUSCULO-SKELETAL: Spine normal? Yes/No Limbs and joints normal? Yes/No

CNS: Power & tone of limbs normal? Yes/No Normal sensation to pinprick? Yes/No Light touch? Yes/No Temperature? Yes/No Vibration? Yes/No Proprioception normal? Yes/No Cranial nerves normal? Yes/No

Reflexes	BJ	TJ	SJ	KJ	AJ	Abdo.	Plantar Clonus
Right							_____
Left							_____

Cerebellar function normal? Yes/No Vestibular function normal? Yes/No Rombergism present? Yes/No Nystagmus present? Yes/No

LAB. INVESTIGATIONS: Hb: g/dL HCT: *Sickle cell trait absent? Yes/No *(initial medical examination)

Blood group: BUN: * Creatinine: * Other _____

Urine PH: Urine free of: albumin? Yes/No sugar? Yes/No protein? Yes/No blood? Yes/No

Comment on any abnormalities detected:

Is the candidate free from physical defect and disease? Yes/No
 Has the candidate the physique for prolonged exertion? Yes/No
 Is the candidate fit for work in all climates if inoculations are up-to-date? Yes/No
 Is the candidate unfit permanently? Yes/No
 Is the candidate unfit temporarily? Yes/No Date for next examination: _____
 Is the candidate fit with restrictions? Yes/No Specify: _____

*At the discretion of the examining doctor

Name and address of examining doctor: _____

Signed: Date: Place: _____

SUPERVISOR'S OR PILOT'S MEDICAL EXAMINATION RECORD — PART II

To be completed by the candidate in ballpoint pen. Circle correct answer. If in doubt, ask the advice of the examining doctor.

■ (a)

Family name: First name(s): Birth date: _____

S.I.N.: Provincial Health No.: _____

(b)

Have you had a pilot's medical examination before? Yes/No If yes, when? Where? _____

(c)

Date and place of any X-ray examinations: _____

(d)

Give details of vaccinations: _____

(e)

Do you have, or have you ever had or been treated for, any of the following medical conditions?

- | | | | |
|--------------------------------------|---------------|---|---------------|
| 1. Asthma | <u>Yes/No</u> | 18. Dizziness, loss of balance | <u>Yes/No</u> |
| 2. Hay fever or allergies | <u>Yes/No</u> | 19. Head injury or concussion | <u>Yes/No</u> |
| 3. Allergy to drugs/medications | <u>Yes/No</u> | 20. Stroke or paralysis | <u>Yes/No</u> |
| 4. Pneumonia or pleurisy | <u>Yes/No</u> | 21. Severe headache or migraine | <u>Yes/No</u> |
| 5. Bronchitis or other lung diseases | <u>Yes/No</u> | 22. Nervous breakdown or mental illnesses | <u>Yes/No</u> |
| 6. Tuberculosis | <u>Yes/No</u> | 23. Eye disorders | <u>Yes/No</u> |
| 7. Sinus trouble | <u>Yes/No</u> | 24. Stomach/duodenal/peptic ulcer | <u>Yes/No</u> |
| 8. Ear disease | <u>Yes/No</u> | 25. Gall bladder disorder | <u>Yes/No</u> |
| 9. High blood pressure | <u>Yes/No</u> | 26. Diarrhea or bowel disease | <u>Yes/No</u> |
| 10. Rheumatic fever | <u>Yes/No</u> | 27. Jaundice or hepatitis | <u>Yes/No</u> |
| 11. Heart disease or murmur | <u>Yes/No</u> | 28. Kidney or bladder disease | <u>Yes/No</u> |
| 12. Chest pain or palpitations | <u>Yes/No</u> | 29. Bone/joint disease or injury | <u>Yes/No</u> |
| 13. Bleeding tendency | <u>Yes/No</u> | 30. Back injury or chronic back pain | <u>Yes/No</u> |
| 14. Skin diseases | <u>Yes/No</u> | 31. Other serious illness or injury | <u>Yes/No</u> |
| 15. Diabetes | <u>Yes/No</u> | 32. Motion sickness | <u>Yes/No</u> |
| 16. Tropical diseases | <u>Yes/No</u> | 33. Varicose veins | <u>Yes/No</u> |
| 17. Fits, blackouts or epilepsy | <u>Yes/No</u> | | |

Give details of any positive (Yes) answers, including dates: _____

(f)

Give date and place of any hospital admissions or operations: _____

(g)

Have you been under medical treatment during the past year? Yes/No If yes, for what? _____

(h)

Are you taking, or have you ever taken, any medicines or drugs? Yes/No If yes, specify: _____

(i)

How much do you smoke? /day How much do you drink? /week Have you ever suffered from any health problems related to mind-altering, "street" or addictive drugs? Yes/No If yes, give details: _____

I (name), , of (address) , declare that all of the above information is true to the best of my knowledge and I give my permission for this information to be communicated to other doctors concerned with my well-being.

Signed : Date: Place: _____

Doctor's Remarks: _____

Candidate's logbook inspected? Yes/No Signed: _____ M.D

If "no", state reason: Dated: _____

SCHEDULE VI

(Subparagraphs 28(1)(a)(iii), 30(1)(a)(iii) and 32(1)(a)(iii))

RECOMMENDATION FOR CATEGORY DIVING SUPERVISOR'S CERTIFICATE

This is to certify that _____, born on _____, 19____ at _____, presently working for _____, as a Category _____, is familiar with all the aspects of diving practice and supervision of that category, as specified under the Canada Oil and Gas Diving Regulations. Therefore, I/we, the undersigned, have no hesitation in recommending this applicant as a category diving

supervisor and, to the best of my/our knowledge and belief, I/we state that I/we know the applicant sufficiently and that I am/we are not aware of any reason why the applicant should not be granted the above-mentioned status.

1. Diving supervisor: { *(please print name)* } Category: From: { *(Date)* }
Signature: _____ Date: _____
2. Diving supervisor: { *(please print name)* } Category: From: { *(Date)* }
Signature: _____ Date: _____
3. Diving contractor or operator: _____

(please print name)

Signature: _____
Date: _____

SCHEDULE VII

(Paragraph 53(b))

DIVER'S MEDICAL EXAMINATION RECORD — PART I

(Removed from this document only)

Canadian Regulatory Module Assessment

Pass Mark – 85%

Name of Applicant: _____

Date of Examination: _____

Answer all questions by circling the letter of the correct answer. Maximum time limit for the paper is 45 minutes.

Note: The assessment (exam) is available from the Diver Certification Board of Canada.