

Atlantic Offshore Occupational Health and Safety Initiative

Consolidated Revised Policy Intent for the Atlantic OHS Regulations

Government of Canada
Government of Newfoundland and Labrador
Government of Nova Scotia

May 2018

Contents

- INTRODUCTION..... 10
- PART 1: INTERPRETATION..... 11
- PART 2: GENERAL..... 19
- PART 3: OHS MANAGEMENT AND OVERSIGHT..... 20
 - OHS Policy..... 20
 - OHS Management System..... 20
 - OHS Program 21
 - Workplace Committees..... 23
 - OHS Coordinators 23
 - Information Sharing and Management..... 23
 - TABLE 1 – Record Retention 24
- PART 4: INCIDENT REPORTING AND INVESTIGATION..... 25
 - Report by Employee 25
 - Incident Notification..... 25
 - Investigation 25
 - Investigation Report 26
 - Minor Injury Record 26
 - Retention of Reports and Records 26
- PART 5: EMERGENCY PREPAREDNESS AND RESPONSE..... 26
 - Emergency Plan 26
 - Emergency Procedures..... 27
 - Fire Protection 27
 - Fire or Explosion Hazard Areas..... 28
 - Fire Fighting Equipment 28
 - Fire Team Personal Protective and Associated Equipment..... 28
 - Emergency Alert Systems 29
 - Emergency Electrical Power 30
 - Emergency Descent Control Devices..... 30
 - Emergency Equipment 30

Instructions and Training.....	30
Emergency Drills and Exercises	31
Standby Vessel.....	32
Notices and Records.....	32
PART 6: FIRST AID.....	32
General	33
TABLE 2 – First Aiders and Medics.....	33
Physicians	33
Medics	34
First Aider	34
First Aid Kits.....	34
Medical Supplies and Equipment	34
Medical Rooms	35
Communication and Information	36
Transportation.....	36
Records.....	36
PART 7: FATIGUE MANAGEMENT, EMPLOYEE HEALTH AND WELLNESS.....	37
Fatigue Management	37
Employee Health and Wellness.....	38
PART 8: MUSCULOSKELETAL INJURY PREVENTION PROGRAM.....	38
PART 9: VIOLENCE AND HARASSMENT PREVENTION.....	39
PART 10: PERSONAL CONDUCT.....	40
PART 11: GENERAL TRAINING.....	40
PART 12: PERMIT TO WORK SYSTEM.....	40
PART 13: PERSONAL PROTECTIVE EQUIPMENT.....	42
Protective Work Wear	42
Protective Headwear	43
Protective Footwear	43
Protective Handwear.....	43
Eye and Face Protection	43
Hearing Protection	43
Respiratory Protection	44

Respiratory Protection for Emergency Egress.....	44
Cabin Grab Bags.....	45
Personal Gas Monitoring.....	45
Skin Protection	45
Protection against Drowning.....	45
Immersion Suits.....	46
Firefighter PPE	47
Protective Electrical Equipment	47
Records.....	47
PART 14: PASSENGERS IN TRANSIT.....	48
Transit by Helicopter	48
Transfer by Vessel.....	49
Life Boats and Life Rafts	49
Training.....	49
PART 15: LEVELS OF LIGHTING.....	50
PART 16: LEVELS OF SOUND.....	51
PART 17: SANITATION AND FACILITIES.....	52
General Workplace Sanitation	52
Waste Material.....	52
Washrooms.....	53
Handwashing Facilities	53
Emergency Eye-wash and Showers.....	53
Potable Water	54
Changing Facilities	55
Contamination Control.....	55
Living Accommodations.....	55
Food Prep, Handling and Storage.....	56
Eating Areas.....	57
Thermal Environment.....	57
Ventilation	58
PART 18: SMOKING ROOMS.....	59
PART 19: STRUCTURAL SAFETY.....	60

Access and Egress	60
Guardrails	61
Toe Boards.....	61
Floor and Wall Openings	62
Open-top Enclosures	62
Stairways and Ramps.....	62
Working on Decks or Bulkheads.....	63
Temporary Heat.....	63
PART 20: PRESSURE AND PIPING SYSTEMS.....	63
PART 21: ELEVATORS AND MANLIFTS.....	63
Standards.....	63
Use and Operation	63
Inspection, Testing, Maintenance and Repair.....	64
PART 22: MATERIALS HANDLING.....	64
Safe Lifting Program	64
Training.....	65
Work Permits.....	65
Lifting and Positioning Personnel	65
Procedures.....	65
Standards.....	66
Safeguarding of Materials Handling Equipment	67
Means of Entering and Exiting.....	67
Operating Compartment	67
Controls	67
Control Systems.....	67
Fire Protection.....	68
Vibration	68
Fuel Containers.....	68
Protection from Falling, Flying or Shifting Objects.....	68
Protection from Environmental Conditions	69
Additional Protection - Mobile Equipment	69
General Operation.....	69

Materials Handling Area	70
Signals	70
Signalling Device	71
Safe Working Loads	71
Positioning the Load	71
Contact with Hazards	72
Crane Operation	72
Operation of Manually Powered Hoists	73
Loose Lifting Gear	73
Manual Handling of Materials	74
Storage of Materials	74
PART 23: PERSONNEL TRANSFER.....	75
Procedures.....	75
Standards.....	75
Transfer	76
Inspection and Testing	76
Repair and Maintenance	77
PART 24: LADDERS.....	77
Fixed ladder design requirements.....	77
Portable ladders	78
Ladder (fixed and portable) Use.....	78
PART 25: SCAFFOLDING AND STAGING.....	79
General Requirements	79
Scaffolds	80
Elevating Work Platform	81
PART 26: ROPE ACCESS.....	81
PART 27: FALL PROTECTION.....	82
PART 28: ELECTRICAL SAFETY.....	86
Electrical Safety Program	86
Qualified Electrical Person.....	87
Working on Electrical Equipment	88
Work within Approach Boundaries	88

Work Permits.....	88
Arc flash.....	88
Insulated Tools and Equipment.....	89
Test Instruments and Equipment.....	89
Electrical Safety Watcher	89
Electrical Room.....	90
Defective Electrical Equipment	90
Electrical Equipment Damage	90
Grounded Electrical Equipment	90
TABLE 3A – Approach Boundaries for AC Systems.....	91
TABLE 3B – Approach Boundaries for DC Systems.....	91
PART 29: CONTROL OF HAZARDOUS ENERGY: LOCKOUT AND OTHER METHODS.....	92
General	92
Permit to Work with Hazardous Energy.....	92
General requirement.....	92
Lock-out Tag-out.....	92
Locks	93
Isolating piping systems	94
PART 30: HAZARDOUS SUBSTANCES.....	94
DIVISION I – GENERAL	94
Hazardous Substances Control Program	94
Control of Hazardous Substances.....	95
Exposure to Hazardous Substances.....	96
Storage, Handling & Use.....	97
Warnings.....	98
Assembly of Pipes.....	98
Employee Education.....	98
Health Surveillance.....	100
Radiation-Emitting Devices	100
DIVISION II – HAZARDOUS SUBSTANCES OTHER THAN HAZARDOUS PRODUCTS	101
DIVISION III – HAZARDOUS PRODUCTS	101
Application.....	101

Safety Data Sheets and Labels in Respect of Certain Hazardous Products	101
Supplier Safety Data Sheets.....	102
Workplace Safety Data Sheets	102
Availability of Safety Data Sheets	103
Labels.....	103
Portable Containers.....	104
Special Cases.....	104
Laboratories.....	105
Signs.....	106
Replacing Labels	106
Exemptions from Disclosure.....	106
Hazardous Waste.....	107
Information Required in a Medical Emergency.....	107
PART 31: EXPLOSIVES.....	107
General	107
Explosives and Detonators	108
PART 32: COMPRESSED GAS.....	108
Portable compressed gas cylinders	109
PART 33: BATTERIES.....	110
PART 34: TOOLS AND MACHINERY.....	110
General	110
Design, Construction, Operation and Use of Tools	110
Instructions and Training.....	111
Machine and Equipment Guarding	111
Use, Operation, Repair and Maintenance of Machine Guards	112
Abrasive Wheels and Grinders	112
Controls	113
Abrasive Blasting and High Pressure Washing	113
PART 35: HOT WORK.....	114
PART 36: CONFINED SPACES.....	115
Confined Space Management Program	115
Identification of Confined Spaces.....	115

Hazard Assessment.....	116
Procedures.....	116
Training.....	117
Confined Space Atmosphere	118
Tests.....	118
Precautions Prior to Entrance	119
Entrance into a Confined Space	120
Hot Work in a Confined Space.....	121
Confined Space Closure.....	121
PART 37: FUELLING.....	122
PART 38: DIVING SAFETY.....	122
Interpretation	122
Planning Requirements	123
Dive Project Plan.....	123
Project Hazard Identification and Risk Assessment	124
Diving Safe Work Procedures	125
Emergency/Contingency Response.....	126
Operational Requirements	127
Duration of Dives and Periods of Rest.....	127
Decompression.....	127
Personnel and Qualifications.....	128
Dive Team Size and Composition	128
Dive Safety Specialists	129
Diving Physician Specialist.....	129
Qualifications, Training and Competency	129
Health, Safety and Working Environment.....	130
Fitness to Work.....	130
First Aid & Medical Supplies and Equipment	130
Medical Contingencies	131
Medical Monitoring and Communications.....	131
Diver Locator	131
Hazardous Substances.....	131

Standby Diver Equipment..... 132

Thermal and Humidity Exposure 132

Seismic Activity 132

Contaminated Working Environment 132

Technical Requirements 133

 System for Failure Detection 133

 Communications..... 133

 Monitoring..... 133

 Breathing Mixtures..... 134

 Gas Cylinders and Storage 135

 Diver Access – Surface Supplied Diving 135

Emergency Preparedness 135

 Emergency Drills and Exercises 135

 Hyperbaric Evacuation..... 136

Records and Reporting 137

INTRODUCTION

On December 31, 2014, amendments to the federal *Canada-Newfoundland and Labrador Atlantic Accord Implementation Act* and the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the corresponding provincial laws came into force. These changes established a statutory occupational health and safety (OHS) regime for each offshore area that apply to all workplaces in the offshore area, as well as passengers in transit to/from and in-between those offshore workplaces. The changes also clearly established the Canada-Newfoundland and Labrador Offshore Petroleum Board and the Canada-Nova Scotia Offshore Petroleum Board as the regulator of OHS matters in its respective administrative area.

Simultaneously, transitional regulations (both federal and provincial versions) were brought into force to implement the OHS regime. Over the course of the past four years, the Governments of Canada, Newfoundland and Labrador and Nova Scotia, with technical advisement from the two offshore Boards, have been working toward developing new OHS regulations to replace the transitional regulations.

As part of the initiative, the governments have engaged stakeholders on each of the four phases of draft policy intent, providing stakeholders with opportunities to provide feedback throughout the process of regulation development. The feedback received has been a critical element in the refinement of the policy intent and will serve to inform the drafting of the regulations.

This document contains the consolidated policy intent, and includes revisions made to previous versions of draft policy intent, based on stakeholder feedback received to date. Written comments on this policy intent may be submitted by June 30th, 2018 to:

Kim Phillips

Project Manager, OHS Initiative

kim.phillips@canada.ca

Written comments will be posted to the Atlantic OHS Initiative webpage without any amendments or alterations. The webpage can be found here: <https://www.nrcan.gc.ca/energy/offshore-oil-gas/18883>

Stakeholder consultation on the draft regulation will be carried out at the time of pre-publication in the Canada Gazette Part I.

PART 1: INTERPRETATION

“Advanced first aid certificate” means the certificate issued upon successful completion of a training program that conforms to the curriculum for advanced first aid outlined in CSA Z1210 *First Aid Training for the Workplace – Curriculum and Quality Management for Training Agencies*, or, in the case of marine crew on a vessel, with Chapter 5 of the Training Standards for Marine First Aid and Marine Medical Care, TP 13008E, published by Transport Canada.

“Arc flash hazard” means a dangerous condition associated with the possible release of energy caused by an electric arc.

“Blaster” means a person who is competent to conduct specialized blasting activity in, at or near an oil or gas well.

“Bulk shipment” has the same meaning as in subsection 5.5(1) of the Hazardous Products Regulations.

“Cabinet” means an unoccupied enclosure designed to permit abrasive blasting, high pressure washing or a similar operation to be conducted safely inside the enclosure by a person who is outside the enclosure.

“Certified to” means having been independently tested by an accredited certification organization as meeting the requirements of a particular standard and bearing a certification mark.

“Competent person” means a person who is

- a) qualified because of that person's knowledge, training and experience to do the assigned work in a manner that ensures the health and safety of every person in the workplace, and
- b) knowledgeable about the provisions of the Act and these regulations that apply to the assigned work, and about potential or actual danger to health or safety associated with the assigned work.

“Compressed gas” means a substance that is a gas at normal room temperature and pressure, and is contained under pressure, usually in a cylinder.

“Conformity assessment” means a process or processes for demonstrating that an equipment, product, service or system meets the requirements of a standard.

“Conform to” means meeting the requirements of, or acting in accordance with, a particular standard.

“Confined space” means an enclosed or partially enclosed space that

- a) is not designed or intended for human occupancy except for the purpose of performing work,
- b) has restricted means of access and egress, or an internal configuration, that could make first aid, evacuation, rescue, or other emergency response services difficult to perform, and
- c) may become hazardous to any person entering it owing to

- i. its design, construction, location or atmosphere,
- ii. the materials or substances in it, or
- iii. any other conditions relating to it.

“Container” means any package or receptacle, including a bag, barrel, bottle, box, can, cylinder, drum and storage tank.

“De-energized” means disconnected from all energy sources and void of any residual or stored energy.

“Detonator” means a device used to fire an explosive charge.

“Electrical equipment” means any apparatus, appliance, device, instrument, fitting, fixture, luminaire machinery, material, or thing used in or for, or capable of being used in or for, the generation, transformation, transmission, distribution, supply, or utilization of electric power, and, without restricting the generality of the foregoing, includes any assemblage or combination of materials or things that is used, or is capable of being used or adapted, to serve or perform any particular purpose or function when connected to an electrical installation, notwithstanding that any of such materials or things may be mechanical, metallic, or non-electric in origin.

“Electrical hazard” means a dangerous condition such that contact or equipment failure can result in electric shock, arc flash burn, thermal burn, or blast.

“Electrically safe work condition” means a state in which an electrical conductor or circuit part has been disconnected from energized parts, locked out in accordance with Part 29, tested to ensure the absence of voltage, and grounded (if grounding is determined to be necessary).

“Electrical safety watcher” means a person who is

- a) immediately available and in line of sight of the work activity;
- b) knowledgeable of the hazards involved with the task being performed;
- c) equipped with appropriate personal protective equipment to effect rescue;
- d) qualified in first aid;
- e) knowledgeable in the procedure to be used to acquire medical assistance; and
- f) trained and equipped in methods of release and rescue.

“Elevating work platform” means a type of integral chassis aerial platform that has an adjustable position platform, supported from ground level by an articulating or telescoping boom or by a vertically oriented telescoping or elevating mast.

“Emergency first aid certificate” means the certificate issued upon successful completion of a training program that conforms to the curriculum for basic level first aid outlined in CSA Z1210 *First Aid Training for the Workplace – Curriculum and Quality Management for Training Agencies*, or, in the case of marine crew on a vessel, with Chapter 4 of the *Training Standards for Marine First Aid and Marine Medical Care*, TP 13008E, published by Transport Canada.

“Enclosure” means a temporary or permanent containment of a work area provided with exhaust ventilation and makeup air to reduce exposure of persons inside the enclosure and prevent the uncontrolled release of air contaminants from the enclosure.

“Energy-isolating device” means a mechanical device that physically prevents the transmission or release of energy, including, but not limited to, the following:

- a) a manually operated electrical circuit breaker;
- b) a disconnect switch;
- c) a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors;
- d) a line valve;
- e) a block; and
- f) other devices used to block or isolate energy.

“Energy Source” means any electrical, mechanical, hydraulic, pneumatic, chemical, radiation, thermal, gravitational or other potential source of energy.

“Environmental Conditions” means meteorological, oceanographical and other natural conditions, including ice conditions, that may affect the operations of a workplace.

“Environmental Tobacco Smoke” or “(ETS)” means the aged and diluted combination of both side-stream smoke (smoke from the lit end of a cigarette or other tobacco product) and Exhaled mainstream smoke (smoke that is exhaled by a smoker). ETS is commonly referred to as secondhand smoke. This definition includes emissions produced by an electronic smoking device.

“Equipment operator” means an employee who operates materials handling equipment.

“ETS-free area” means an area where no smoking occurs that is separated from ETS areas according to the requirements of these Regulations.

“ETS area” means spaces where smoking is permitted, as well as those areas not separated from spaces where smoking is permitted in accordance with these Regulations.

“Explosive” means a substance, including a detonator, flare igniter, signalling device or primed explosive, that is manufactured or used to produce an explosion by detonation or deflagration and that is regulated by the Explosives Act (Canada), but does not include ammunition for weapons, fireworks or explosive-actuated tools.

“Explosive activity” includes all of the following:

- a) storing, handling, transporting, preparing and using explosives,
- b) loading a well with explosive devices.

“Fatigue” means a state of reduced mental and physical alertness or functioning caused by sleep related disruption or deprivation as a result of extended work hours, insufficient sleep or the effect of sleep

disorders, medical conditions or pharmaceuticals which reduce sleep or increase drowsiness.

“First aider” means a person who holds, at minimum, a valid first aid certificate that includes Cardiopulmonary Resuscitation.

“Floor opening” means an opening in a floor, platform or deck that measures 300 mm or more in its smallest dimension, or any other such opening that may pose a hazard to an employee.

“Fugitive emission” means a hazardous product in gas, liquid, solid, vapour, fume, mist, fog or dust form that escapes from processing equipment, from control emission equipment or from a product into the workplace.

“Guard” means a type of safeguard consisting of a physical barrier that prevents an employee from reaching over, under, around or through the barrier to a moving part or point of operation.

“Hazardous area” is an area on the marine installation or structure where flammable mixtures are, or are likely to be, present in sufficient quantities and for sufficient periods of time such as to require special precautions to be taken in the selection, installation and use of machinery and electrical equipment.

“Hazardous energy” means any electrical, mechanical, hydraulic, pneumatic, chemical, radiation, thermal, gravitational, or other energy that can harm personnel.

“Hazardous waste” means a hazardous product that is acquired or generated for recycling or recovery or is intended for disposal.

“High pressure washing” means the use of water or other liquid delivered from a pump at a pressure exceeding 34 MPa (5,000 psi), with or without the addition of solid particles, to remove unwanted matter from a surface.

“Hot work” means any work that involves burning, welding, or any other activity that produces fire, spark or other source of ignition.

“Incident” means any event that caused or, under slightly different circumstances, would likely have caused harm to personnel, an unauthorized discharge or spill or an imminent threat to the safety of an installation, vessel or aircraft. It includes, but is not limited to events which may or may not have resulted in the following:

- a) fatality;
- b) missing person;
- c) serious injury;
- d) occupational illness;
- e) fire/explosion;
- f) collision;
- g) pollution;
- h) accidental accumulation, spill or leak of hazardous substance;

- i) loss of well control;
- j) implementation of emergency response procedures;
- k) the impairment of any structure, facility, equipment or system critical to the safety of persons, an installation or support craft;
- l) the impairment of any structure, facility, equipment or system critical to environmental protection; and
- m) imminent threat to the health or safety of a person, installation or support craft.

“International Code of Practice” means the International Code of Practice published by the Industrial Rope Access Trade Association.

“Laboratory sample” has the same meaning as in subsection 5(1) of the Hazardous Products Regulations.

“Locked out” means, in respect of any equipment, machine or device, that the equipment, machine or device has been rendered inoperative and cannot be operated or energized without the consent of the person who rendered it inoperative.

“Limited approach boundary” means an approach limit at a distance from an exposed energized electrical conductor or circuit part within which a shock hazard exists.

“Living accommodations” means sleeping quarters, dining/eating (galley) areas, general recreation areas, washrooms, food preparation areas, office space, and medical areas.

“Lockout” means placement of a lockout device on an energy-isolating device in accordance with an established procedure.

“Lockout device” means a device that prevents the manipulation or removal of an energy-isolating device in accordance with an established procedure.

“Materials handling area” means an area within which materials handling equipment or a load has the potential to create a hazard to any person.

“Materials handling equipment” means equipment used to transport, lift, move or position materials, personnel, goods or things and includes cranes and mobile equipment but does not include an elevator or manlift.

“Medic” means a competent person who

- a) has experience with helicopter or fixed-wing aircraft evacuation for medical purposes,
- b) is the holder of an advanced cardiac life support certificate or basic cardiac life support instructor's certificate issued by a body recognize by the International Liaison Committee on Resuscitation (ILCOR), and
- c) is the holder of:
 - i. a license to practice medicine in Canada and have at least two years’ clinical experience in intensive care or emergency practice, or

- ii. a Registered Nursing Certificate recognized by a provincial regulatory body and have at least two years' clinical experience in intensive care or emergency practice, or
- iii. an Advanced Care Paramedic Certificate or Critical Care Paramedic Certificate recognized by the Paramedic Association of Canada or issued by a college accredited by the Canadian Medical Association and have at least three years' experience as an advanced life support provider.

“Minor injury” means an employment injury or occupational illness for which medical treatment is provided, but does not include a serious injury.

“Mobile equipment” means a wheeled or tracked vehicle which is engine or motor powered, together with attached or towed equipment, and includes a forklift, but does not include a vehicle operated on fixed rails or tracks.

"Musculoskeletal injury (MSI)" means an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue, including a sprain, strain and inflammation that may be caused or aggravated by work.

“Muster List” means a written document that assigns personnel to specific muster stations for evacuation and used to keep track of attendance at each station.

“Open-top enclosures” means open-top bins/tanks, vats, pits or any similar container

“Permit-to-work system” is a formal recorded process used to control work which is identified as potentially hazardous. It is also a means of communication between site/installation management, plant supervisors and operators and those who carry out the hazardous work.

“Personnel on Board (POB) List” means a written document containing the overall count of all persons at the workplace on a given day, including the name, position, cabin number and employer.

“Portable compressed gas cylinder” means a cylinder having a water capacity of 450 kg or less that contains or is intended to contain a compressed or liquefied gas.

“Potable Water” means water that conforms to the Guidelines for Canadian Drinking Water Quality, under the authority of the Minister of Health.

“Professional engineer” means a person who is registered or licensed to engage in the practice of engineering under provincial legislation and who is competent to do the work being performed.

“Qualified electrical person” means one who has demonstrated skills and knowledge related to the construction and operation of electrical equipment and installations and has received safety training to identify and manage the hazards involved.

“Restricted approach boundary” means an approach limit at a distance from an exposed energized

electrical conductor or circuit part within which there is an increased likelihood of electric shock, due to electrical arc over combined with inadvertent movement, for personnel working in close proximity to the energized electrical conductor or circuit part.

“Rope access” means a method of using ropes, in combination with other devices, for one of the following activities while further protected by a safety line, in which both the working line and safety line are connected to the user’s harness and separately secured to a reliable anchorage in such a way that a fall is prevented or arrested:

- a) descending or ascending a working line to get to or from the work area,
- b) work positioning.

“Safeguard” means the use of a guard, a safety device, a shield, an awareness barrier, warning signs, or other appropriate means, either singly or in combination, to provide effective protection to employees from hazards.

“Safe working load” means, with respect to materials handling equipment, the maximum load that the materials handling equipment is designed and constructed to handle or support safely, taking into account factors including waves, current, extremes of temperature, wind load and load sail area.

“Sale” includes offer for sale, expose for sale and distribute.

“Signaller” means a person instructed by an employer to direct, by means of visual or auditory signals, the safe movement and operation of materials handling equipment.

“Significant new data” has the same meaning as in subsection 5.12(1) of the Hazardous Products Regulations.

“Ship’s ladder” means a permanently installed steep pitched stair-like structure having rigid treads supported by rigid side rails, with handrails on each side.

“Standard first aid certificate” means the certificate issued upon successful completion of a training program that conforms to the curriculum for intermediate first aid outlined in *CSA Z1210 First Aid Training for the Workplace – Curriculum and Quality Management for Training Agencies*, or, in the case of marine crew on a vessel, with Chapter 3 of the Training Standards for Marine First Aid and Marine Medical Care, TP 13008E, published by Transport Canada.

“Station Bill” means a posted written document that provides details on what positions are assigned to emergency teams, as well as general instructions for unassigned personnel during an emergency and may also provide minimum safe manning requirements

“Supplier label” means a label prepared by a supplier that discloses any information elements required by the Hazardous Products Act.

“Supplier safety data sheet” means a safety data sheet prepared by a supplier that discloses any

information elements required by the Hazardous Products Act.

“Support Craft” means a vessel, vehicle, aircraft, standby vessel or other craft used to provide transportation for or assistance to persons on the site where a work or activity is conducted.

“Threshold Limit Value” or “TLV” means the documentation of threshold limit values for chemical substances and physical agents in the work environment by the American Conference of Governmental Industrial Hygienists (ACGIH).

“Wall opening” means an opening in a wall, partition or bulkhead that measures at least 750 mm high and 300 mm wide, or any other such opening that that may pose a hazard to an employee.

“Washroom” means a room equipped with, at a minimum, one or more toilets and one or more hand-washing facilities, and may include a shower.

“Waste material” means food waste, garbage, refuse and other debris that does not pose a specific and/or unique hazard.

“Work area” means specific areas within the workplace in which an employee undertakes their own work or activity.

“Work Permit” Is a paper or electronic certificate or form, and associated documents, which is used as part of an overall permit to work to authorize and control work which is identified as potentially hazardous.

“Workplace harassment” means engaging in a course of vexatious comment or conduct against an employee in a workplace that is known or ought reasonably to be known to be unwelcome

“Workplace label” means a label prepared by an employer in accordance with Hazardous Substances - Division III.

“Workplace safety data sheet” means a safety data sheet prepared by an employer in accordance with subsection 398(1) or (2).

“Work place violence” means any action, conduct, threat or gesture of a person towards an employee in their work place that can reasonably be expected to cause harm, injury or illness to that employee.

	PART 2: GENERAL
1	In these Regulations, any reference to a standard is to be read as a reference to the most recent version of that standard.
2	<p>1) Except as otherwise provided in these regulations, an employer must</p> <ul style="list-style-type: none"> a) ensure that any equipment, components of equipment or components of a system are erected, installed, assembled, used, handled, stored, adjusted, maintained, repaired, inspected, serviced, tested, cleaned and dismantled in accordance with: <ul style="list-style-type: none"> i. the manufacturer’s specifications or instructions for the equipment, components or system; or, ii. in accordance with a maintenance plan which takes into consideration: <ul style="list-style-type: none"> 1. the manufacturer’s specifications or instructions for the equipment, components or system; 2. has been approved by a recognized Classification Society or Certifying Authority, as appropriate, and 3. Takes into consideration the historical performance of the equipment; b) comply with and ensure compliance with the applicable standards for the equipment, components or system as specified in these regulations. <p>2) Except as otherwise provided in these regulations, a person must use equipment, components of equipment or components of a system in accordance with</p> <ul style="list-style-type: none"> a) the manufacturer’s specifications or instructions for the equipment, components or system; and, b) any applicable standards for the equipment, components or system specified in these regulations.
3	<p>1) An employer must ensure that any equipment used is inspected</p> <ul style="list-style-type: none"> a) by the user, before each use; and b) by a competent person, annually, or as specified in any applicable Part of these regulations. <p>2) If the inspection reveals a defect or condition that adversely affects the equipment, an employee must not use the equipment until the defect or condition is remedied.</p>
4	Records of inspection, maintenance, repair and modification of equipment shall be kept by the employer, unless otherwise specified in these regulations, and be readily accessible to the equipment operator and a person inspecting and maintaining the equipment in accordance with Section 18.
5	The equipment manufacturer’s operation manual and maintenance manual for each piece of equipment

	in use at the workplace shall be readily available at the workplace (electronically or hardcopy).
6	<p>No person shall:</p> <ul style="list-style-type: none"> a) use any machinery, equipment or tools in a manner that may cause an undue hazard to the health or safety of a person, or which is in violation of these regulations; b) intentionally tamper or interfere with any piece of equipment, tool, machine, system, safeguard, guard, alarm or any other thing such that that the health and safety of any person in the workplace could be compromised; c) intentionally impair or render inoperative a safety device or system, unless permitted to do so by these regulations.
7	<p>Defective equipment, tools, machines, systems, safeguards, guards or any other thing used in the workplace shall not be used and shall either be:</p> <ul style="list-style-type: none"> a) put in good working order; or, b) taken out of service and identified in a manner that ensures that it is not inadvertently returned to service until it has been made safe for use.
PART 3: OHS MANAGEMENT AND OVERSIGHT	
OHS Policy	
8	<p>1) OHS policy shall contain:</p> <ul style="list-style-type: none"> a) the commitment of the Operator to cooperate with any committee or coordinator, as the case may be, with regard to health and safety; b) a statement of the responsibilities of supervisors, employees and other workplace parties with regard to health and safety. <p>2) The OHS policy must be endorsed by an accountable senior corporate official.</p>
OHS Management System	
9	<p>1) The operator shall appoint an accountable person, consistent with Section 2.4 of the Framework Regulations (draft policy intent), on its behalf to ensure that its management system complies with all statutory and regulatory obligations.</p> <p>2) The management system shall:</p> <ul style="list-style-type: none"> a) be systematic, explicit, comprehensive and proactive, with controlled documentation that is set out in a logical and systematic fashion to allow for ease of understanding and efficient implementation. b) correspond to the size, scope, nature and complexity of the operator's activities, and to the hazards and risks associated with those activities. <p>3) The operator must have a documented organizational structure that enables it to:</p>

	<ul style="list-style-type: none"> a) meet the requirements of the management system and meet its obligations under this section; b) determine and communicate the roles, responsibilities and authority of the corporate officials and employees at all levels of the company; <p>4) The management system shall include, in addition to those laid out in the Act, the processes for:</p> <ul style="list-style-type: none"> a) setting goals for the improvement of health and safety; b) setting objectives and specific targets that are required to achieve the goals established under (a) and for ensuring their annual review; c) coordinating and controlling the management and operation of activities among employers, suppliers, providers of service, the operator and others; d) conducting formal conformity assessments against all applicable statutory requirements demonstrating equivalency (or better) of any alternate standards used in the workplace (where conformance is permitted) e) ensuring that employees are: <ul style="list-style-type: none"> i. trained and competent to perform their duties; ii. aware of their responsibilities in relation to the plans and procedures required by these regulations; iii. supervised to ensure that they perform their duties in a manner that is safe; and iv. aware of the activities of others and has the information that will enable them to perform their duties in a manner that is safe; f) ensuring that all documents associated with the system are current and valid and readily available at all points of use; g) collecting and managing data, including ensuring that data management systems are established and maintained for monitoring and analyzing data and identifying trends associated with personnel and operational health and safety, including hazards, incidents; h) internal reporting, investigation and root cause analysis of nonconformities, hazards, and incidents, and for taking corrective actions to prevent their re-occurrence; i) maintaining training and competency records, including-workplace committee training. <p>5) Where dive activities are expected to take place, the Operator’s OHS Management System must take into account the necessary systems and documentation to conduct safe diving operations</p>
10	<p>1) Operator must maintain a list of all standards used as alternatives to those that are prescribed (where conformance is permitted) and where the Operator wishes to make a subsequent change to the list, the change must be accepted by the Chief Safety Officer (CSO).</p> <p>2) The list of approved standards must be made available to any workplace party, upon request.</p>
	OHS Program
11	<p>1) The OHS Program shall correspond to the size, scope, nature and complexity of the employer's activities, and to the hazards and risks associated with those activities.</p> <p>2) An occupational health and safety program required under section 205.02/210.02 of the Act shall be</p>

signed and dated by the employer and shall include:

- a) the arrangements for coordinating and controlling the management and operation of activities among the operator, employers, suppliers and providers of services and others at the workplace;
- b) the processes for ensuring that persons contracted by the employer or for the employer's benefit comply with the program developed under this section and the Act and regulations;
- c) a list of any alternate standards used as alternatives to the prescribed standards (where conformance is permitted),
- d) conformity assessments demonstrating equivalency (or better) of any alternate standards used in the workplace (where conformance is permitted);
- e) all the programs required under these regulations;
- f) identification of the types of work, including those required pursuant to the Act, the regulations or by order of an officer, for which written safe work procedures are required;
- g) the preparation of those written safe work procedures;
- h) an emergency response plan;
- i) a plan for orienting and training employees and supervisors in workplace and job-specific safe and healthy work practices, plans, policies and procedures, and ensuring that employees are:
 - i. trained and competent to perform their duties,
 - ii. made aware of their responsibilities in relation to the processes and procedures required by this section,
 - iii. made aware of the activities of others and provided the information that will enable them to perform their duties in a manner that is safe;
- j) the processes for supervising employees to ensure that they perform their duties in a manner that is safe;
- k) processes for maintaining records;
- l) a hazard identification system that includes:
 - i. procedures and schedules for regular inspections;
 - ii. procedures for the prompt investigation of incidents to determine cause(s) of the incident and action(s) necessary to prevent a reoccurrence;
 - iii. procedures for ensuring the reporting of hazards by employees and other persons in the workplace;
 - iv. process for the correction of hazards, including the identification of those persons accountable for the correction of hazards;
 - v. procedures for reporting by the employer to the committee or coordinator all identified incidents, nonconformities, hazards;
- m) a system for ongoing monitoring of workplace occupational health and safety, and if changes in hazards are identified, the prompt follow-up and control of identified hazards;
- n) provisions for establishing and operating an occupational health and safety committee, including provisions respecting:
 - i. maintenance of membership records,
 - ii. rules of procedure,
 - iii. access by the committee to management staff with the authority to resolve health and safety issues;
 - iv. access to information about the health and safety matters required under the Act and the regulations, and

	<p>v. a plan for training committee members as required under the Act and these Regulations;</p> <p>3) An employer that is required to develop, implement and maintain an occupational health and safety program under section 205.2/210.02 of the Act shall:</p> <p>1) review and, where necessary, revise the occupational health and safety program at least every 3 years, or:</p> <p>i. where there is a change of circumstances that may affect the health and safety of persons in the workplace,</p> <p>ii. where the Operator makes changes to its management system, and</p> <p>iii. where a health and safety officer requires a review.</p>
	<p>Workplace Committees</p>
12	All committee members shall be provided training that permits them to competently carry out their function on the committee.
13	Committees shall make available to any employee, upon request, the minutes of committee meetings.
14	In addition to what is required by the Act, the Committee rules of procedures shall address, at minimum:
	<p>a) Quorum for a meeting;</p> <p>b) Composition of the committee to ensure that all employers, providers of service, etc have employee representation;</p> <p>c) how inspections will be scheduled, initiated and conducted;</p> <p>d) how the committee will process complaints or concerns of employees, work refusals, accidents or incidents reported to the committee or committee member;</p> <p>e) the obligation on committee members to treat a complaint or concern raised to any one member as a complaint or concern raised to the committee as a whole;</p> <p>f) how a recommendation or a response to a complaint or concern is made, including a response to an employee who raised the complaint or concern, and a recommendation to the employer; and,</p> <p>g) any other elements as required by the CSO.</p>
	<p>OHS Coordinators</p>
15	OHS Coordinators shall be provided training that permits them to competently carry out their function.
	<p>Information Sharing and Management</p>
16	<p>1) Records and reports and other types of prescribed information must be retained in a form and manner acceptable to the Board;</p> <p>2) Records and reports shall be made readily available for examination by a health and safety officer and by the workplace committee or coordinator.</p>

- 17
- 1) The operator or employer, as the case may be, shall ensure that all document required to be posted under Section 205.097(1)/210.098(1) shall be posted for a minimum of 45 days.
 - 2) Where an application for determination has been made under subsection 205.1(1)/210.1(1), all related documents created under subsections 205.097(1)(a)-(c)/210.098(1)(a)-(c) shall remain available until a decision or order has been made under subsection 205.1(6)/210.1(6), and shall accompany the decision or order for the duration of time that the decision or order is required to be posted under section (1) above.

18 Records, reports and any other information that must be retained under these regulations shall be retained by the employer for the period of time outlined in Table 1, for the respective type of information:

TABLE 1 – Record Retention

	Type of Record	Retention Period
1.	Records and reports related to: a) occupational exposure b) potential occupational exposure c) diseases or illnesses that may be occupational-related	Minimum 40 years after the exposure, disease or illness was documented
2.	Records and reports related to incidents	Minimum 10 years after the date the record was documented
3.	Records and reports related to: a) minor injuries b) any other hazardous occurrence [including violence/harassment in the workplace]	Minimum 5 years after the date the record was documented
4.	Records related to inspection maintenance, repair, modification of the equipment or tools	For as long as the tool or equipment is in use and minimum 5 years after the date the tool or equipment is taken out of service.
5.	Records related to the OHS program or any programs developed under the OHS program	Minimum 5 years after the date the program is replaced or repealed
6.	Records Related to training and Competency	Minimum 5 years after the date a person ceases to be employed to carry out their duties
7.	Divers personal log books	Minimum 5 years after the log book is complete
8.	Diving activity logs	Minimum 40 years following the end of the dive program.
9.	Records of drills and exercises	Minimum 5 years after the date the drill or exercise is carried out

	10.	Written procedures, plans or codes of practice	Minimum 5 years after the date the procedure, plan or code of practice is replaced or repealed;
	11.	Work permits and associated documentation	Minimum 5 years after the date the document is made
	12.	Orders received from the CSO	As long as the project is in operation under authorization.
	13.	Blasting and Explosives records	Minimum 5 years after the date of the blast.

PART 4: INCIDENT REPORTING AND INVESTIGATION

Report by Employee

- 19 If an employee becomes aware of an incident or other hazardous occurrence arising in the course of or in connection with the employee's work that has caused injury to the employee or to any other person, the employee must without delay report the incident or other hazardous occurrence to the employer, orally or in writing.

Incident Notification

- 20
- 1) If an employer is aware of an incident, or other hazardous occurrence affecting any of the employer's employees in the course of employment, the employer must, without delay,
 - a) take necessary measures to ensure the safety of personnel;
 - b) notify the Operator;
 - 2) The operator shall notify the Board of an incident or other hazardous occurrence, in the form and manner prescribed by the Board, as soon as it becomes known to the Operator.
 - 3) Within 24 hours after the incident or other hazardous occurrence, the Operator must provide written notice of the incident or other hazardous occurrence, in the form and manner as prescribed by the Board.

Investigation

- 21
- 1) The employer must
 - a) appoint a competent person to carry out an investigation of the incident or other hazardous occurrence; and
 - b) notify the committee or the coordinator of the incident or other hazardous occurrence and of the name of the person appointed to investigate it.
 - 2) The operator shall ensure that incidents and other hazardous occurrences are investigated to a level proportional to the potential consequences, and identify its causal factor(s), root cause(s), and corrective and preventative action(s).

	Investigation Report
22	<ol style="list-style-type: none"> 1) An investigation report identifying the causal factor(s), root cause(s), corrective and preventative action(s), and other information of the incident or other hazardous occurrence must, within 14 days after the occurrence, be submitted to the: <ol style="list-style-type: none"> a) Operator; b) committee or the coordinator; and c) the Board. 2) The report to the Board must be in the form and manner prescribed by the Board.
	Minor Injury Record
23	<ol style="list-style-type: none"> 1) Every employer must keep a record of each minor injury of which the employer is aware that affected any of the employees in the course of employment. 2) The record must contain <ol style="list-style-type: none"> a) the date, time and location of the occurrence that resulted in the minor injury; b) the name of the injured or ill employee; c) name of the first aider providing treatment; d) a brief description of the minor injury and treatment; and e) the causes of the minor injury.
	Retention of Reports and Records
24	Records and reports must be retained in accordance with the record retention schedule in Section 18.
	PART 5: EMERGENCY PREPAREDNESS AND RESPONSE
	Emergency Plan
25	<ol style="list-style-type: none"> 1) The employer who has control over the workplace shall conduct a risk assessment of the workplace and develop, implement and maintain an emergency plan that sets out the procedures, practices and resources and monitoring necessary to effectively prepare for and mitigate against the effects of, or/and evacuation from, any reasonably foreseeable emergency that might compromise the health and safety of employees. 2) Where there are multiple employers in a workplace, they must either abide by: <ol style="list-style-type: none"> a) emergency procedures developed and implemented by the employer who has control over the workplace, or b) emergency procedures that have been integrated with those of the employer who has control over the workplace. <p>1) The emergency response plan shall include, at minimum:</p>

	<ul style="list-style-type: none"> a) The maximum number of personnel who can safely occupy the workplace, as well as a process for updating the list of the personnel on board; b) The minimum amount of people needed on board to be able to operate safely in the event of an emergency; c) the name, address and contact information of the Operator, where the Operator is not the same as the Employer who has control over the workplace; d) Contact information for support craft or other means of transport to be used to evacuate the workplace, e) a drawing illustrating the arrangement of the workplace that will clearly show <ul style="list-style-type: none"> i. the location of all exits, stairways, elevators, corridors, fire escapes and any other routes of exit, ii. location of life saving appliances, muster stations and survival crafts; iii. location, quantity and type of emergency and protection equipment; iv. the location of safety critical emergency shut-down switches; v. the location, quantity and type of all communications equipment, vi. the location of first aid stations, medical rooms and casualty clearing areas; and vii. scale of the drawing and the name of the person who verified the drawing
	Emergency Procedures
26	<p>The emergency procedures developed and maintained as part of the Emergency Plan must contain a full written description of the procedures to be followed by the employees, including but not limited to</p> <ul style="list-style-type: none"> a) the duties of the employees during an emergency, including an indication of the station at which each crew member is to report; b) instructions that inform people of the emergency alarm signals, including a description of how the order to abandon is given; c) the name, position, usual location and contact information of each person responsible for the execution of the procedures and their delegates d) a list of agencies, companies or organizations, including those operating in the nearby vicinity, that could render assistance in the event of an emergency and their contact information; and e) a list and location of the emergency and protection equipment required to carry out the procedures.
27	<p>A copy of the emergency plan and procedures, including associated station bills, muster and personnel on board (POB) lists, must be kept up to date and readily accessible to all employees at the workplace, including.</p> <ul style="list-style-type: none"> a) Muster Lists to be posted by muster points so that head count can be taken; b) Station bills to be posted in conspicuous places on every deck; c) POB List must be updated daily and posted in dedicated emergency operations centres; and d) Emergency escape routes to be posted in every cabin.
	Fire Protection
28	<ul style="list-style-type: none"> 1) Every workplace must be designed, constructed, arranged and maintained as to minimize, to the extent that is reasonably practicable, the risk of fire.

	<ul style="list-style-type: none"> 2) Fire escapes, exits, stairways and any other means of evacuation at a workplace must be in serviceable condition and ready for use at all times. 3) Exits to the exterior must be clearly identified by illuminated signs or otherwise clearly visible. 4) Location of safety equipment and escape routes marked with light-reflecting signs and directional arrows
	Fire or Explosion Hazard Areas
29	<ul style="list-style-type: none"> 1) In areas that have been identified as Hazardous Areas, a person shall not use an open flame or other source of ignition or perform any hot work, unless in accordance with Part 35. 2) Signs must be posted in conspicuous places to identify the existence of a Hazardous Area, identifying the area as an area at risk for fire and explosion.
	Fire Fighting Equipment
30	Every workplace must be equipped with the fire fighting equipment that is appropriate for the type of workplace and class of fire that may occur.
	Fire Team Personal Protective and Associated Equipment
31	<ul style="list-style-type: none"> 1) The Employer must ensure that fire team is provided with personal protective and associated equipment for fighting fires in an appropriate quantity and size, as determined by the risk assessment carried out in section 25 and Contingency Plan required under the Section 3.6 of the Framework Regulations (draft policy intent), where applicable. 2) Notwithstanding the above, the minimum number of personal protective and associated equipment required on a normally attended installation involved in the drilling for or production of hydrocarbons is 10. 3) Personal Protective equipment for the purpose of fighting fires must include, at minimum: <ul style="list-style-type: none"> a. a self-contained breathing apparatus that <ul style="list-style-type: none"> i. is capable of functioning for at least 30 minutes, ii. conform to the requirements of: <ul style="list-style-type: none"> 1. Canadian Standards Association CAN/CSA-Z94.4, <i>Selection, Use, and Care of Respirators</i>, 2. NFPA 1981 Standard on <i>Open Circuit Self Contained Breathing Apparatus for the Fire Service</i>; and 3. CSA Z 180.1, <i>Compressed Breathing Air and System</i> iii. Is equipped with a personal distress alarm device; iv. has two spare bottles readily available;

	<ul style="list-style-type: none"> b. a portable electric safety lamp that <ul style="list-style-type: none"> i. will operate safely in the conditions anticipated; ii. capable of operating for at least three hours, and iii. can be easily attached to the clothing of a firefighter, at or above the waist level; c. an axe with an insulated handle and a carrying belt; and d. a fire-resistant life and signalling line and a safety belt and harness that meet the requirements of National Fire Protection Association, 1983 <i>Standard on Fire Service Life Safety Rope, Harness and Hardware</i>. e. protective clothing, including boots, gloves, helmet and visor, coat and trousers that conforms to National Fire Protection Association 1971, <i>Standard on Protective Clothing for Structural Fire Fighting</i>, and that <ul style="list-style-type: none"> i. protects the skin from being burned by heat radiating from a fire and by steam, ii. has a water-resistant outer surface, iii. in the case of boots, is made of rubber or other electrically non-conducting material, and f. in the case of gloves, conforms to National Fire Protection Association 1973, <i>Standard on Gloves for Structural Fire Fighting</i>; and <p>3) However, if the workplace is a ship used for construction or for geotechnical or seismic work, at least four sets of the required firefighting equipment must be provided and this equipment must conform to the standards set out in</p> <ul style="list-style-type: none"> (a) regulation 10, <i>Fire fighting</i>, of Chapter II-2 of the <i>International Convention for the Safety of Life at Sea (SOLAS)</i>, 1974; (b) the International Maritime Organization's <i>International Code for Fire Safety Systems</i>; and (c) the Council of the European Union's <i>Directive 96/98/EC – Marine equipment</i>, as adopted by domestic law of member states. <p>4) Fire Team Personal Protective and associated equipment must be kept ready for use and stored in a place that is easily accessible and at least one set must be easily accessible from the helicopter deck.</p> <p>5) Firefighters wearing respiratory equipment must be accompanied by another firefighter similarly equipped with the same air capacity.</p>
--	--

Emergency Alert Systems


32	<p>1) Every workplace must be equipped with an public address and alarm system , which shall be audible in all areas of the workplace where employees may be present at any given time that warns all employees when</p> <ul style="list-style-type: none"> a) the safety of the workplace is threatened; b) the workplace has to be abandoned (evacuated) immediately; c) a fire; d) there is a malfunction of a mechanical ventilation system provided for an area where concentrations of toxic or combustible gases may accumulate. e) there is a person overboard, and any other condition or event is likely to threaten the health or safety of employees at the workplace
----	--

	2) In areas where noise levels may prevent a person from being alerted of an emergency, both audible and visual alarms shall be installed.
	Emergency Electrical Power
33	Every workplace must be equipped with an emergency electrical power supply sufficient to operate the following for safe occupancy and /or egress from the workplace, <ul style="list-style-type: none"> a) the alarm system and warning devices; b) the emergency lighting system; c) internal and external communications systems; and d) light and sound signals marking the location of the workplace.
	Emergency Descent Control Devices
34	<ol style="list-style-type: none"> 1) An emergency descent control device that is equipped with a brake mechanism that controls the descent of persons using the device must be provided in the derrick and on elevated parts of a marine installation or structure. 2) The system must be capable of operating following loss of main power. 3) The employer must set out in writing working instructions for the use of the device referred to in subsection (1) and keep them in a conspicuous place on the marine installation or structure. 4) An emergency descent-control device referred must be installed, inspected and maintained by a competent person.
	Emergency Equipment
35	If, in a workplace, there is a hazard of entering the ocean <ul style="list-style-type: none"> a) Appropriate emergency equipment must be provided and held in readiness; b) a competent person to operate all the emergency equipment provided must be readily available; c) unless a standby vessel is used, a fast rescue craft meeting the requirements of the <i>International Life Saving Appliance Code</i> must be provided and held in readiness; and d) written emergency procedures for all foreseeable scenarios where a person may fall into the ocean must be prepared by the employer containing <ol style="list-style-type: none"> i. a full description of the procedures to be followed and the responsibilities of all persons in the workplace, ii. the location of any emergency equipment, and iii. Training in the rescue procedures and the use of rescue equipment
	Instructions and Training
36	1) Every employee must be instructed and trained in

	<ul style="list-style-type: none"> a) the procedures to be followed by the employee in the event of an emergency; and b) the location, use and operation of any emergency and fire protection equipment that they are reasonably expected to use. <p>2) Any employee assigned to an emergency response team must be educated, trained, and competent in their roles and responsibilities enabling them to safely and effectively carry out their assigned emergency team duties.</p>
--	--

Emergency Drills and Exercises	
---------------------------------------	--

35	<ul style="list-style-type: none"> 1) There must be a plan in place which describes the various emergency drills and exercises to be conducted, the types of scenarios and frequency, based on the risk assessment carried out in Section 25 and must include, as applicable: <ul style="list-style-type: none"> a) Well control b) Ballast control c) Person overboard/fast rescue boat d) First aid / Medical response e) Anchor quick release f) Maritime security g) Collision h) Helicopter crash i) loss of containment j) rescue from height k) Confined space l) Electrical incident rescue m) spill response 2) Notwithstanding the above, the following drills and exercises must be conducted at the minimum frequency specified below: <ul style="list-style-type: none"> a) A fire drill conducted monthly; b) A drill to practice mustering must be conducted weekly; and c) A drill to practice evacuation and abandonment of the workplace, including lowering of davit-launched lifeboats (without launching) where applicable, must be conducted at least monthly; 3) Everyone in the workplace must participate in the applicable drills, so scheduling must account for the various shift rotations to ensure everyone is familiar with how to respond and is proficient in carrying out their duties during an emergency. 4) Where a person visits the workplace on an infrequent basis, and is therefore not part of the regularly scheduled drills and exercises, the employer must make arrangements to ensure these persons are accompanied by someone who is familiar with the drill and emergency response measures when on board. 5) Drills and exercises related to potential scenarios that require donning of marine abandonment suits must require new employees, during their first rotation, to practice donning the suit.
----	---

	<p>6) The drills and exercises noted above must be carried out after any significant change in the activities of a program or in the emergency plan or procedures.</p> <p>7) Where the workplace is equipped with lifeboats:</p> <ul style="list-style-type: none"> a) lifeboats must be boarded by employees wearing survival suits and securing themselves on a seat in a manner that ensures that each employee participates in this exercise at least every 6 months. b) Coxswain receive workplace specific training on the use of the lifeboat and associated launching equipment c) An annual lifeboat lowering exercise to test the integrity and operation of the lifeboat and launching equipment, d) When environmental conditions permit, lifeboats are launched and manoeuvred in the water annually; e) where environmental conditions do not permit a launch to achieve (d) above, operators must work in consultation with the manufacturer and Certifying Authority, to test and/or complete additional inspections of all components normally tested by regular lifeboat launches. 
	<p>Standby Vessel</p>
36	<p>For every drilling, production or accommodation installation, the employer must provide a standby vessel that has capacity to reach personnel within 20 minutes and that provides safe refuge for all employees who have evacuated from a workplace.</p>
	<p>Notices and Records</p>
37	<ul style="list-style-type: none"> 1) Notices must be posted at appropriate locations at a workplace setting out the emergency procedures to be followed and the escape routes to be used in the event of an emergency. 2) Every employer must keep a record of all emergency drills and evacuation drills carried out by the employer’s employees containing: <ul style="list-style-type: none"> a) the date and time at which the drill or exercise was conducted; b) the drill or exercise scenario(s); c) list of all persons who participated in the drill or exercise; d) the length of time taken to complete the drill or exercise; including length of time to achieve a full muster. e) observations regarding effectiveness of the drill or exercise, and opportunities for improvement 3) Records of drills and exercises must be retained in accordance with Section 18.
	<p>PART 6: FIRST AID</p>

General


- 38
- 1) The employer who has control over the workplace shall:
 - a) carryout a risk assessment to determine the health and safety risks and scenarios for all reasonably expected injuries and illnesses that could occur in the workplace
 - b) develop a documented medical emergency response plan taking in consideration the location and time of year of the project, expected operational and the total personnel on board capacity including the capacity of any accommodation or facilities adjacent to and in control of the employer.
 - c) establish written instructions that provide for the prompt rendering of first aid or medical care to an employee for any injury or illness; and
 - d) make a copy of the instructions readily available for examination by employees; and
 - e) provide readily available medics and first aiders, designated in writing, in accordance with Table 2 to render prompt and appropriate first aid or medical care to employees and persons in the workplace
 - 2) The Employer, in consultation with the medic, shall ensure sufficient equipment, facilities, transportation, medications and supply of first aid and medical supplies are available at the workplace, for all reasonably expected injuries and illnesses that could occur and that were identified in the risk assessment.
 - 3) An employer shall:
 - a) allow a first aider and any other employee that the first aider needs for assistance, to provide prompt and adequate first aid to an employee who has been injured or taken ill; and
 - b) ensure that the first aider and any other employee assisting the first aider have adequate time, with no loss of pay or benefits, to provide first aid or medical care.

TABLE 2 – First Aiders and Medics

# of Employees	# of Standard First Aiders	# of Advanced First Aiders	# of Medics
6-10	1 plus 1 for every 2 employees in excess of 6	-	-
11-30	3 plus 1 for every 2 employees in excess of 10	1	-
31-40	13 plus 1 for every 2 employees in excess of 30	1	-
Over 40	17 plus 1 for every 2 employees in excess of 40	2 plus 1 for every 10 employees in excess of 40	1

Physicians

39 Every employer shall ensure that a physician who has specialized knowledge in the treatment of the health and safety hazards that may be encountered in the oil and gas industry is readily available at all times for medical consultation or for transportation to the workplace to provide medical treatment

	Medics
40	<p>1) A medic shall:</p> <ul style="list-style-type: none"> a) be assigned a medical room; b) be readily available to render first aid and medical care; and, c) where necessary, administer medical care as directed by the physician. <p>2) In providing care to an injured or ill employee, not be overruled by anyone other than a physician.</p> <p>3) The medic shall not be assigned duties that will interfere with the prompt and adequate rendering of first aid.</p>
	First Aider
41	<p>A first aider shall:</p> <ul style="list-style-type: none"> a) render first aid and medical care to persons who are injured or ill at the workplace; b) in providing care to an injured or ill employee, not be overruled by anyone not trained in first aid; and c) be in charge of providing care for the injured or ill employee until the treatment is complete or the employee is under the care of an equally or more qualified medical caregiver.
	First Aid Kits
42	<p>1) First aid kits must be readily accessible at various locations throughout the workplace and must be clearly identified by a conspicuous sign, and shall</p> <ul style="list-style-type: none"> a) contain only the supplies that are required for rendering first aid; b) be inspected at least monthly, and its contents maintained in a clean, dry and serviceable condition, and c) conform to CSA Z1220 <i>First Aid Kits for the Workplace</i>. <p>2) A risk assessment must be carried out to determine the number and location of automated external defibrillators required in a workplace, but at minimum, one shall be provided in every workplace in a common area accessible to employees.</p>
	Medical Supplies and Equipment
43	<p>1) The employer shall carry out a risk assessment, in consultation with a physician, to determine the appropriate type and quantity of medical supplies and equipment necessary for the workplace, giving consideration to the following:</p> <ul style="list-style-type: none"> a) number of personnel on board;  b) nature of work and activities carried out in the workplace and the real and potential hazards related to that work or activities; c) distance to and response time for emergency medical services; d) layout of the workplace; e) environmental factors, including thermal considerations.

	<p>2) Prescription drugs or other medications dispensed by the medic shall be stored in a locked cabinet under the control of the medic.</p>
	<p>Medical Rooms</p>
<p>44</p>	<p>1) The employer shall ensure that a medical room is provided and that it is clearly identified by a conspicuous sign where the workplace is normally occupied.</p> <p>2) Every medical room shall be:</p> <ul style="list-style-type: none"> a) under the supervision of a medic, or where a medic is not required, the first aider available in the workplace who is the holder of the highest level of first aid certificate; b) located within easy access to a toilet room; c) constructed to allow for optimum ease of access to persons carrying a patient on a stretcher; d) maintained in an orderly and sanitary condition; e) contains information regarding hazardous substances in the workplace and the first aid required to treat exposure to the hazardous substances; f) maintained, if reasonably practicable, at a temperature of not less than 18°C and not more than 24°C; g) have surfaces that are easily cleaned; and h) equipped with the medical supplies and equipment necessary, as determined by the risk assessment in section 38, but at minimum: <ul style="list-style-type: none"> i. A treatment table accessible from both sides and at least one end; ii. an adjustable medical lamp iii. An arrangement to secure an occupied stretcher in place horizontally iv. a washbasin supplied with running cold water and hot water; v. a hand-held showerhead that could easily reach the patient; vi. a storage cupboard and a counter; vii. a separate cubicle or curtained-off area with a cot or bed equipped with a moisture-protected mattress and two moisture-protected pillows; viii. a table and two or more chairs; ix. a lockable medical chest or cabinet; x. a waste bin and a means to safely dispose of biohazards and sharps; i) have sufficient electrical outlets with appropriate voltage configuration for the equipment to be used; j) be within easy access to the helideck; k) located and constructed to permit ease of manoeuver of an occupied stretcher between the medical room and helideck; l) be provided with effective means of hands-free communication and an up-to-date list of appropriate emergency contacts and telephone numbers for use in emergencies; and m) the first aid supplies and equipment set out in this Part.

	Communication and Information
45	<ol style="list-style-type: none"> 1) The employer shall have available in the medical room: <ol style="list-style-type: none"> a) information regarding first aid to be rendered for any injury or illness; b) information regarding transport procedures for injured person. 2) The employer shall post and keep posted in a visible place in the workplace: <ol style="list-style-type: none"> a) information regarding the location of first aid kits and medical rooms; b) at every first aid kit and medical room, a list of first aider, and information on how they may be contacted; c) near the telephones, a list of telephone numbers kept up-to-date for use in emergencies;
	Transportation
46	<ol style="list-style-type: none"> 1) Before assigning persons to a workplace, the employer shall: <ol style="list-style-type: none"> a) ensure that for that workplace there is an ambulance service or other suitable means of transporting an injured or ill person to a hospital onshore; b) provide for that workplace a means of quickly summoning the ambulance service or other suitable means of transportation. 2) If air transportation is the primary or only method for transporting an injured or ill person, all of the following requirements must be met: <ol style="list-style-type: none"> a) before the start of operations in a workplace, arrangements must be made with an air or medevac service to ensure that an appropriate aircraft is reasonably available to the workplace during those operations; b) the arrangements in paragraph (a) must include procedures for: <ol style="list-style-type: none"> i. the employer to determine the availability of appropriate aircraft for medevac before the start of each work day, and ii. the air service to notify the employer if an appropriate aircraft ceases to be available including but not limited to crew, aircraft or weather constraints. 3) Where a person is transported to shore for medical treatment, the employer shall provide medical supplies appropriate for a medical emergency is readily available for transport with the injured or ill person. 4) If a stretcher is required, the employer shall ensure that the means of transportation provided is capable of accommodating and securing occupied stretcher(s). 5) If injured or ill person needs to be accompanied during transportation, the employer shall ensure that the person is accompanied by a first aider or higher level of medical aid during transportation.
	Records
47	<ol style="list-style-type: none"> 1) If an injured or ill person seeks treatment from a first aider or medic, the first aider or medic must


	<p>a) enter in a first aid or medical care record the following information:</p> <ul style="list-style-type: none"> i. the date and time of the reporting of the injury or illness; ii. the full name of the injured or ill person; iii. the date, time and location of the occurrence of the injury or illness; iv. a brief description of the injury or illness; v. a brief description of the first aid rendered, if any; and vi. a brief description of arrangements made for the treatment or transportation of the injured or ill; <p>b) sign the first aid or medical care record.</p> <p>2) The employer must keep a first aid or medical care record in accordance with Section 18.</p>
	<p>PART 7: FATIGUE MANAGEMENT, EMPLOYEE HEALTH AND WELLNESS</p>
	<p>Fatigue Management</p>
<p>48</p>	<p>A Fatigue Management Program shall be established and maintained to effectively manage fatigue and to reduce incidents, injuries and damage where fatigue is recognized as a factor. The program shall address, at minimum:</p> <ul style="list-style-type: none"> a) Identification of the factors that may impact fatigue, including work scheduling, task type and length, work and workplace conditions, employee health and stress; b) Maintaining an appropriate work shift design that allows adequate recovery periods; c) Maintaining records related to persons working excessive hours or without the minimum rest periods; d) Roles and responsibilities of all workplace parties in managing fatigue; e) Training for all workplace parties on safe work practices and procedures related to fatigue as a hazard; f) Regular monitoring of the workplace, including reviews of incidents reports, ergonomic and environmental factors, work hour exceedances, employee complaints and workplace committee reports to identify any trends of fatigue; g) Consideration of fatigue as a hazard in all safe work practices and procedures; h) Consideration of fatigue when investigating incidents preventative action(s) used to eliminate fatigue or reduce the impact of fatigue; i) Protocols for the employer to proactively identify occurrences of fatigue and to take action to address.

49	<ol style="list-style-type: none"> 1) Every employee shall be provided with a minimum 11 consecutive hours of rest in any given 24-hour period. 2) The Employer may allow a person to work without the rest period referred to in subsection (1) provided that: <ol style="list-style-type: none"> a) the Employer has assessed the risk associated with the person working the extra hours and determined, in consultation with the employee(s), that such work can be carried out without increased risk to safety or to the environment, and, b) the employee is provided with compensatory rest period(s) afterwards. 3) If an Employer allows a person to work without the rest period referred to in subsection (1), the Employer shall ensure that a description of the work, the names of the employees performing the work, the hours worked and the risk assessment referred to in subsection (2) are recorded. 4) Subsection (1) does not apply in the event of an emergency at the workplace that may be hazardous to the health or safety of employees. 5) Notwithstanding the above, marine crew on vessels operating in the jurisdiction for less than six months may alternatively comply with the daily hours of work and minimum rest requirements outlined in the <i>International Convention on Standards for Training, Certification and Watchkeeping for Seafarers (STCW), 1978</i>.
	<p>Employee Health and Wellness</p>
50	<p>A Health and Wellness Program shall be established that effectively promotes employee health and wellness in the workplace and that addresses:</p> <ol style="list-style-type: none"> a) Impairment; b) working remotely; c) mental health; d) Illness management; e) Healthy lifestyle.
	<p>PART 8: MUSCULOSKELETAL INJURY PREVENTION PROGRAM</p>
51	<p>The employer must establish and maintain a Musculoskeletal Injury (MSI) Prevention program, as part of Employer’s OHS program required under the Act, to address factors in the workplace that may expose employees to a musculoskeletal injury and must identify, at minimum, the following:</p> <ol style="list-style-type: none"> a) Method for identifying MSI hazards in the workplace; b) Method for assessing the MSI risk to an employee; c) Control measures necessary to reduce MSI risk to as low as reasonably practicable; d) Education to ensure employees are knowledgeable in MSI hazard identification and trained in the use of specific control measures to be employed; and e) Methods for monitoring the control measures for effectiveness;

52	An employer shall, when performing an MSI assessment, consult with <ul style="list-style-type: none"> a) employees with signs or symptoms of MSI injury; and b) a representative sample of the employees who are required to carry out the work being assessed.
53	An employer shall implement control measures as soon as reasonably practicable.
54	An employer shall, without delay, implement interim control measures when the introduction of permanent control measures is delayed.
PART 9: VIOLENCE AND HARASSMENT PREVENTION	
55	The employer shall develop and post at a place accessible to all employees a work place violence and workplace harassment prevention policy setting out, among other things, the following obligations of the employer: <ul style="list-style-type: none"> a) to provide a safe, healthy and violence-free work place; b) to dedicate sufficient attention, resources and time to address factors that contribute to work place violence and workplace harassment including, but not limited to, bullying, teasing, and abusive and other aggressive behaviour and to prevent and protect against it; c) to communicate to its employees information in its possession about factors contributing to work place violence and workplace harassment; and d) to assist employees who have been exposed to work place violence or workplace harassment.
56	A violence and harassment prevention program shall be developed to implement the policy in section 55 and shall include, at a minimum: <ul style="list-style-type: none"> a) An assessment of the potential for workplace violence and workplace harassment in the workplace, taking into consideration the nature, type and condition of work, previous experience in the workplace and occupational experience in similar workplaces; b) include measures and procedures to control the risks identified in the assessment; c) include measures and procedures for summoning immediate assistance when workplace violence occurs or is likely to occur; d) include measures and procedures for employees to report incidents of workplace violence or workplace harassment to the employer or supervisor; e) set out how the employer will investigate and deal with incidents or complaints of workplace violence or workplace harassment; f) provisions for the instruction and training for employees on the factors that contribute to work place violence and workplace harassment.
57	The Program shall be reviewed every three years, or following an incident of workplace violence or workplace harassment in the workplace or a change in conditions of the workplace.


	PART 10: PERSONAL CONDUCT
58	A person shall not engage in horseplay or other disruptive behaviour that may create or constitute a hazard to any employee.
59	Loose-fitting clothing, long hair, dangling accessories, jewellery or other similar items that are likely to be hazardous to the health or safety of an employee in a workplace must not be worn unless they are so tied, covered or otherwise secured as to prevent the hazard.
60	<ol style="list-style-type: none"> 1) An employee must not work when that employee’s ability to function is impaired in a manner that may be hazardous to the health or safety of any employee at the workplace as a result of fatigue, injury, illness, alcohol, drugs or any other condition. 2) Subsection (1) does not apply in the event of an emergency at the workplace where the employee is required to carry out their assigned emergency roles.
61	An Employee with a documented medical condition that creates impairment shall not be assigned to work where those impairments endanger the health and safety of that employee or other persons in the workplace.
	PART 11: GENERAL TRAINING
62	<ol style="list-style-type: none"> 1) Prior to an employee entering any workplace, the Operator shall ensure that employees are provided, and the Employer shall provide training, in, at minimum: <ol style="list-style-type: none"> a) offshore survival training, in accordance with a training program accepted by the CSO. b) regulatory awareness, including Employee rights and responsibilities; c) hydrogen sulfide safety, for workplaces involved in drilling and production; d) hazardous substances as per Part 30; e) first aid as per Part 6. 2) Prior to commencing work in any workplace, employees must be provided an orientation to the workplace in relation to hazards and emergency procedures and be provided training in any emergency duties that may be assigned.
	PART 12: PERMIT TO WORK SYSTEM
63	The employer must establish and maintain, as part of Employer’s OHS program required under the Act, a permit to work system that, at minimum, contains: <ol style="list-style-type: none"> a) Roles and responsibilities; b) Training and education on the system;

	<ul style="list-style-type: none"> c) How necessary information will be communicated to relevant personnel; d) Work requiring a permit; e) Method of assessing hazards; f) Work permit process; g) Record keeping and retention; and h) Regular verification and monitoring of the system.
64	A work permit is required where an activity in the workplace presents a potential hazard that may be capable of causing death or serious injury, and any other activity requiring a work permit, as prescribed in these regulations.
65	The employer must designate a competent person to issue a written work permit before the commencement of the work.
66	<p>The work permit documentation must include:</p> <ul style="list-style-type: none"> a) The signature of the competent person(s) completing the work permit, and b) The signatures of all persons involved in the work, verifying that they have read and understood the permit.
67	<p>The work permit must identify the following information:</p> <ul style="list-style-type: none"> a) the name of the person who issues the permit; b) the name of each person to whom it is issued; c) the periods during which the permit is valid; d) The type of work that: <ul style="list-style-type: none"> i. can be performed; and ii. is explicitly banned; e) the type of work to be performed and its location; f) assessment of conditions related to any hazard of performing the work, and instructions arising from those conditions, including, if applicable, <ul style="list-style-type: none"> i. the work procedures to be followed, ii. the identification of equipment that is to be locked out; iii. a description of any safety tests to be performed before the work is performed, during the performance of the work and following the completion of the work, iv. the specification of the particulars of the tags or signs to be used, if any, v. the specification of the protection equipment to be used, if any, vi. in the case of an emergency, the procedures to be followed, vii. a description of the specific space, work or electrical equipment or system to which the instructions apply, viii. the identification of any other work, including but not limited to any other permits or certificates, that may affect the emergency or work procedures to be followed; g) Any other engineering and administrative control measures identified as necessary; h) any other information that is necessary to ensure all parties are informed of the health and safety risks to be undertaken.

68	The work permit documentation must be made readily available for examination by employees for the period in which the work is being performed.
69	The work permit documentation shall be retained in accordance with Section 18.
PART 13: PERSONAL PROTECTIVE EQUIPMENT	
70	Every person in the workplace who is exposed to a hazard must use the personal protective equipment prescribed by this Part if <ul style="list-style-type: none"> a) it is not reasonably practicable to eliminate or control the hazard in a workplace within safe limits; and b) the use of personal protective equipment may prevent or reduce injury from the hazard.
71	All personal protective equipment <ul style="list-style-type: none"> a) must be designed to effectively protect the person from the hazard for which it is provided; b) must not in itself create a hazard; c) must be compatible so that one item of protective equipment does not make another item ineffective.
72	All personal protective equipment must be <ul style="list-style-type: none"> a) inspected and tested by a competent person; and b) maintained in good working order and in a clean and sanitary condition by a competent person.
Protective Work Wear	
73	<ol style="list-style-type: none"> 1) Appropriate protective work wear must be selected and worn with consideration given to the hazards within the work area. 2) Where layering of work wear occurs, then all layers of the work wear must be compatible and it must continue to protect against the hazard. 3) Where there is a hazard from moving equipment or loads, work wear must be selected and conform to CSA Z96 <i>High-Visibility Safety Apparel</i>. 4) Work wear must be selected in accordance with the Appendix on selection in CSA Standard Z96 <i>High-Visibility Safety Apparel</i>. 5) Where there is potential for exposure to fire or radiated heat emitting from fire, fire resistant work wear must be worn that conforms to CSGB 155.21 <i>Recommended Practices for the Provision Against Hydrocarbon Flash Fire</i> or NFPA 2112: <i>Standard on Flame-Resistant Garments for Protection of Industrial Personnel</i>.  6) Where there is potential for arc flash, clothing worn beneath the fire resistant work wear must not


	be made of a synthetic material and they must not contain, or the employee wear, anything that can act as a conductor.
	Protective Headwear
74	If there is a hazard of head injury in a workplace, the employer must provide protective headwear conforms to CSA Standard Z94.1, <i>Industrial Protective Headwear — Performance, Selection, Care and Use</i> .
	Protective Footwear
75	<ol style="list-style-type: none"> 1) An employee’s footwear shall be of a design, construction and material appropriate to the protection required. 2) If there is a hazard of a foot injury or electric shock through footwear, protective footwear must be provided that conforms to either: <ol style="list-style-type: none"> a) CSA Standard Z195, <i>Protective Footwear</i>; b) ASTM F2413, <i>Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear</i>; c) ANSI Z41, <i>Personal Protection — Protective Footwear</i>; or d) ISO 20345, <i>Personal protective equipment — Safety</i>.
	Protective Handwear
76	Appropriate protective handwear must selected and worn with consideration given to the hazards within the work area.
	Eye and Face Protection
77	<ol style="list-style-type: none"> 1) If there is a hazard of injury to the eyes, face, ears or front of the neck of an employee in a workplace, the employer must provide eye or face protectors that conforms to CSA Standard Z94.3, <i>Eye and Face Protectors</i>. 2) An eye or face protector must be selected in accordance with Annex A of CSA Standard Z94.3 <i>Eye and Face Protectors</i>. 3) Adequate precautions must be taken where a hazardous substance or condition may adversely affect an employee wearing contact lenses.
	Hearing Protection
78	In accordance with Part 16, where it is not practicable to reduce the noise to permissible levels or to isolate employees from the noise, the employees shall wear personal protective equipment that conforms to CSA Z94.2 <i>Hearing Protection Devices - Performances, Selection, Care and Use</i> .

	<h3 style="color: #4F81BD;">Respiratory Protection</h3>
79	<ol style="list-style-type: none"> 1) A respiratory protection program must be developed, maintained and implemented and must include the following, at minimum: <ol style="list-style-type: none"> a) a risk assessment completed by competent person to determine the respiratory hazards present; b) the respirator selection criteria considering the hazards identified in the risk assessment; c) fit testing requirements; d) the respirator care, use and maintenance requirements. 2) Respiratory protective equipment must be: <ol style="list-style-type: none"> a) Selected, used and maintained in conformance with CSA Standard Z94.4, <i>Selection, Use and Care of Respirators</i>; and b) listed in the <i>NIOSH Certified Equipment List</i> published by the United States National Institute for Occupational Safety and Health. 3) If air is provided for the purpose of a respiratory protective equipment: <ol style="list-style-type: none"> a) the air must be certified to either CSA Standard Z180.1, <i>Compressed Breathing Air and Systems</i> or EN 12021 - <i>Compressed Air Breathing Quality</i>; and b) the system that supplies air must be tested, operated and maintained in conformance with the CSA Standard-referred to in paragraph (a). 4) The employer must ensure adequate methods or instrumentation for the detection of hazardous atmospheric gases are employed to: <ol style="list-style-type: none"> a) prevent unsafe accumulations b) protect workers from harmful exposure to the hazard. 5) A person who may be required to use a respiratory protective device must not have hair that interferes with the functioning of the breathing device.
	<h3 style="color: #4F81BD;">Respiratory Protection for Emergency Egress</h3>
80	<ol style="list-style-type: none"> 1) Emergency Escape Breathing Devices that conform to the International Maritime Organizations’ International Code for Fire Safety Systems shall be placed strategically throughout the marine installation or structure to facilitate the escape of personnel. 2) Smoke hoods to protect against smoke inhalation must be provided in sleeping quarters and machinery spaces, as required by section 82, and any spaces where smoke inhalation is an identified hazard. 3) For escape from immediately dangerous to life or health (IDLH) atmospheres respiratory protection for emergency egress shall be provided that has a rated service time in excess of the anticipated time needed to reach the temporary safe refuge or muster point. 4) In addition to subsection(3):

	<ul style="list-style-type: none"> a) a Pressure-Demand SCBA must be equipped with an audible alarm that sounds when the air supply has diminished to 33% the capacity of the unit; and b) a Multifunctional SCBA/Airline Respirators must have an auxiliary self-contained air supply with a sufficient rated service time to allow for escape by way of the planned escape route, but must not have less than a 15 minute rated service time.
81	If a self-contained breathing apparatus cylinder has a dent, isolated pitting, cracks or splits, which may compromise its integrity, the cylinder must be removed from service until it has been shown to be safe for use by means of a hydrostatic test.
	Cabin Grab Bags
82	Each cabin must contain, for each person, a smoke hood, heat resistant gloves and a portable light source contained in a readily available grab bag for emergency use. This personal protective equipment must be provided for use in conditions of fire, heat, gas escape, or smoke, to enable persons to reach muster areas, temporary refuge, evacuation or escape points. 
	Personal Gas Monitoring
83	<ul style="list-style-type: none"> 1) Where a hazard from gas exists, personal gas monitors shall be worn by every employee on production facilities. 2) In all other workplaces, the Employer must carry out a risk assessment to determine whether personal gas monitoring is required, and where it is determined to be necessary, shall provide appropriate personal gas monitoring devices. 3) Personal gas monitors must be calibrated in accordance with the manufacturer's specifications by a competent person.
	Skin Protection
84	If there is a hazard of injury, illness or disease to or through the skin in a workplace, the employer must provide to every person in the workplace <ul style="list-style-type: none"> a) An effective shield or screen; b) An effective cream or barrier lotion to protect the skin; c) an appropriate body covering; or d) other control measures necessary to protect the skin.
	Protection against Drowning
85	Where there is a hazard of drowning, the employer must provide every person with either <ul style="list-style-type: none"> a) a life jacket that conforms to: <ul style="list-style-type: none"> i. Canadian General Standards Board Standard 65.7, <i>Life Jackets</i>; or ii. Regulation 2 of Part 1 of Annex 6 to the International Maritime Organization's Resolution MSC.81(70), <i>Revised Recommendation on Testing of Life-Saving Appliances</i>;

	<ul style="list-style-type: none"> b) A personal floatation device that: <ul style="list-style-type: none"> i. has been approved by Transport Canada, Canadian Coast Guard or United States Coast Guard; ii. is appropriate for the weight of the person who will wear it; iii. has sufficient buoyancy to keep the person’s head afloat; and iv. has fully automated technology and manual inflation back-up; or c) a safety net or a fall-protection system.
--	---

	<h2 style="color: #0070C0; margin: 0;">Immersion Suits</h2>
--	---


86	<ol style="list-style-type: none"> 1) Appropriately fitted immersion suits must be provided to all employees in the event they are required to abandon the workplace. 2) Risk assessment to be carried out by Employer who has control over the workplace to determine the number and type of suits required, selection of sizes of suits necessary, and location of suits in the workplace.  3) Risk assessment must consider: <ol style="list-style-type: none"> a) Maximum personnel on board; b) Anthropometric (sizing) profile of the employees in the workplace; c) Location within the workplace that employees are generally located for work and leisure activities; d) Potential incidents that may result in emergency evacuation; e) Configuration of the workplace and potential hazards that could be encountered as a result of an incident and evacuation; f) Time it takes for rescue operations to reach the area; g) Environment and conditions of the location of the workplace. 4) Notwithstanding the above, the following minimum number of immersion suits is required: <ol style="list-style-type: none"> a) two immersion suits for every person on board a (regularly occupied) production, drilling or accommodation installation b) one immersion suit for every person on board a vessel, plus two extra suits in each of the bridge and the engine control room (consistent with SOLAS requirements) c) one immersion suit for every person on board a normally unattended installation 5) Immersion suits must conform to <ol style="list-style-type: none"> a) CGSB 65.16 <i>Immersion Suit Systems</i>; b) UL 15027 <i>Standard for Immersion Suits</i>; or c) the International Maritime Organization’s <i>International Life-Saving Appliance (LSA) Code</i> and Resolution MSC.81(70), <i>Revised Recommendation on Testing of Life-Saving Appliances</i>; and 6) Where the immersion suit conforms to either subsection 5(b) or 5(c), the immersion suit must additionally conform to Part I, Chapter I, Section 1.2.1; and Part II, Section 15 of the <i>Canadian Life Saving Appliance Standard - TP 14475</i>, published by Transport Canada.
----	--

	Firefighter PPE
87	<i>Refer to section 31 for Firefighting Protective Equipment requirements.</i>
	Protective Electrical Equipment
88	<p>1) Where a person is exposed to an electrical hazard, appropriate protective electrical equipment shall be provided and worn and that conforms to the applicable standard listed below:</p> <ul style="list-style-type: none"> a) ASTM D120, “Standard Specification for Rubber Insulating Gloves”, b) ASTM D1051, “Standard Specification for Rubber Insulating Sleeves”, c) ASTM D1048, “Standard Specification for Rubber Insulating Blankets”, d) ASTM D1050, “Standard Specification for Rubber Insulating Line Hose”, e) ASTM D1049, “Standard Specification for Rubber Insulating Covers”, f) ASTM D 178, “Standard Specification for Rubber Insulating Matting”, g) ASTM F696, “Standard Specification for Leather Protectors for Rubber Insulating Gloves and Mittens”, and h) ASTM F711, “Standard Specification for Fiberglass-Reinforced Plastic (FRP) Rod and Tube Used in Live Line Tools”. <p>2) Where arc flash hazard is present, a non-conductive rescue hook shall be made readily available.</p>
	Records
89	<p>1) A record of all personal protective equipment requiring maintenance must be kept for as long as the equipment is in use.</p> <p>2) The record referred to in subsection (1) must contain</p> <ul style="list-style-type: none"> a) a description of the personal protective equipment and the date of its acquisition; b) the date and result of each inspection and test of the personal protective equipment; c) the date and nature of any maintenance work performed on the personal protective equipment since its acquisition; and d) the name of the competent person who performed the inspection, test, maintenance or repair of the personal protective equipment.

PART 14: PASSENGERS IN TRANSIT

Transit by Helicopter

- 90
- 1) The Operator shall ensure all passengers in transit to/from/in-between workplaces by helicopter are supplied with a flight suit that conforms to CSGB 65.17 *Helicopter Passenger Transportation Suit* and an emergency underwater breathing apparatus (EUBA) that conforms to Canadian Aviation Regulations.
 - 2) All passengers must wear the provided suit during transit and carry an EUBA in the manner defined in Canadian Aviation Regulations.
 - 3) Training in the use of the suit and EUBA, including practice in donning, shall be provided to all passengers.
 - 4) Notwithstanding subsection (1) and (2), where it is not practicable for an injured or ill person to don the suit, there must be a:
 - a) dedicated medivac flight authorized by a physician, and
 - b) attendant responsible for the injured or ill person who
 - i. is qualified to provide medical care;
 - ii. has demonstrated capability in providing assistance with emergency egress from a ditched helicopter; and
 - iii. has demonstrated capability in assisting an injured or ill person to access and board a lift raft.
 - 5) The Operator must ensure that helicopters:
 - a) are fit for the purpose of safely flying passengers in the Canada-Newfoundland and Labrador / Canada-Nova Scotia offshore area; and
 - b) do not fly over sea states that exceed flotation capability.
 - 6) The operator shall develop functional specifications for helicopters, taking into consideration the following:
 - a) issues related to redundancy for long over-water flights;
 - b) the aircraft's ability to land on water in various sea states;
 - c) the aircraft's ability to communicate with the shore base, the installation, other support craft and lifeboats;
 - d) the rapid and effective deployment of life rafts and other emergency equipment in the event of an emergency landing on water or a capsized;
 - e) the configuration and design of aircraft interiors, including but not limited to doors, windows, upper torso passenger restraints, etc. to protect passengers and allow the most efficient emergency egress of passengers considering both landings on water and helicopter capsized;
 - f) offshore operational requirements, including but not limited to weather effects on helicopter

	<p>load limits, flying at night, the transport of passengers and freight at the same time and any other factor that could affect operational requirements</p> <p>g) the amount of reserve helicopter fuel kept on board installations and the rationale used to arrive at this amount;</p> <p>h) the provision of suitable equipment to assist in underwater escape and how this may impact helicopter design and maintenance; and</p> <p>i) maintenance systems and the incorporation of automated usage and monitoring systems or other methods to ensure the continued suitability of the aircraft.</p>
91	Passengers shall be able to communicate directly with the pilot in order to alert of an emergency.
92	Flight tracking technology shall be employed to permit the helicopter to be tracked at all times over the flight path.
	Transfer by Vessel
93	<p>1) The Operator shall ensure every passenger in transit to/from/in-between workplaces by vessel are supplied with an immersion suit that meets the specifications laid out in Section 86(5) and 86(6).</p> <p>2) Immersion suits shall be stowed in a readily accessible and marked location, above the margin line.</p> <p>3) Training in the use of the suit, including practice in donning, shall be provided to all passengers.</p>
94	For personnel transfer from a vessel to a marine installation or structure (or vice versa) that occurs over water other than by fixed gangway or fast rescue craft, passengers must wear either a helicopter transportation suit (per the above specification) or an immersion suit (per the above specification).
95	For overnight voyages the operator shall ensure that the maximum occupancy per cabin does not exceed 4 persons and the passenger to full washroom ratio does not exceed 4 to 1.
96	Vessel tracking technology shall be employed to permit the vessel to be tracked at all times.
	Life Boats and Life Rafts
97	<p>1) The Operator must ensure that space requirements related to persons wearing survival suits, in addition to weight, must be considered when determining maximum occupancy and their launching appliances. </p> <p>2) Two position indicating devices must be readily available for use in the life boats or life rafts.</p>
	Training
98	1) All passengers in transit shall possess a valid offshore survival training certificate, acceptable to the CSO.

	<p>2) All persons shall receive a Helicopter/Vessel Safety Briefing prior to being given transport to or from an offshore installation. The briefing must be repeated for each trip and shall include, at a minimum, the following information:</p> <ul style="list-style-type: none"> a) helicopter/vessel awareness to include a briefing on emergency / safety equipment such as the location and use of first-aid kits and fire extinguishers; b) demonstration of donning and doffing of the helicopter transportation/marine abandonment suit; c) cautionary measures when embarking, disembarking and while enroute; d) the role of passengers during emergencies; e) the location and use of emergency exits and equipment (including EUBA); and f) escape/abandonment procedures, including meaning of alarms, location of muster stations and location and deployment procedures for survival craft. <p>3) All passengers transferred by vessel shall be provided with a safety briefing in the procedures and precautions to be observed when transiting from a vessel to an installation or another vessel and vice versa, including at a minimum the following information:</p> <ul style="list-style-type: none"> a) Description of the personnel transfer equipment; b) PPE to be worn; and, c) Emergency procedures.
	<p>PART 15: LEVELS OF LIGHTING</p>
99	This Part does not apply to the lighting of the bridge of a mobile offshore drilling unit, or the bridge of any ship used for construction, production or diving or for geotechnical or seismic work.
100	An employer shall ensure the provision of lighting that is sufficient for the type of work being done considering <ul style="list-style-type: none"> a) the quantity of illumination; and b) the quality of illumination, including reflectance, direct glare and reflected glare
101	Minimum lighting levels must conform to those outlined in the <i>IESNA Lighting Handbook: Reference and Application</i> , published by the Illuminating Engineering Society of North America (IESNA).
102	Where a failure of a lighting system would create conditions dangerous to the health and safety of employees, an automatic emergency lighting system shall be provided for the workplace and the exit routes.
103	The automatic emergency lighting system shall provide dependable illumination while the primary lighting system is off to enable all emergency measures to be carried out, including <ul style="list-style-type: none"> a) emergency shutdown procedures, and b) egress and evacuation of employees from the premises.

104	<p>The automatic emergency lighting system must be inspected and tested at a frequency that ensures the continued integrity of the lighting systems and at minimum:</p> <ul style="list-style-type: none"> a) inspected and tested monthly and maintained in accordance with manufacturer specifications; and b) tested annually to determine whether the units provide lighting for a period equal to the design criteria.
105	<p>Handling, storage and disposal of lighting components and bulbs shall be conducted in a manner so as not to present a hazard to personnel and in accordance to manufacturers' instructions.</p>
106	<p>Where lighting components are disposed of by crushing or compacting, it shall be done in an area adequately ventilated to protect the health and safety of the employee and the employee shall be provided with and use appropriate protective equipment.</p>
	<p>PART 16: LEVELS OF SOUND</p>
107	<p>An employer shall implement and maintain a noise control and hearing conservation program if noise in the workplace exceeds permissible exposure limits established by the American Conference Governmental Industrial Hygienists (ACGIH).</p>
108	<p>A noise control and hearing conservation program established under Section 107 shall comply with the following minimum requirements:</p> <ul style="list-style-type: none"> a) a noise survey of the workplace to identify high noise areas shall conform to CSA Z107.56 <i>Procedures for the Measurement of Occupational Noise Exposure</i>; b) the employer shall first take appropriate action to implement control measures to reduce noise to permissible levels; c) where it is not practicable to reduce the noise to permissible levels or to isolate employees from the noise, the employees shall wear personal protective equipment that conforms to CSA Z94.2 <i>Hearing Protection Devices - Performances, Selection, Care and Use</i>; d) audiometric tests for every employee must be conducted every two years, or more frequently as recommended by an audiologist or occupational physician; and e) mandatory training and education for all employees in the health and safety hazards of excessive sound levels and the selection, fitting, maintenance, care and use of hearing protection.
109	<p>A noise control and hearing conservation program shall be documented and those records shall be retained in accordance with Section 18.</p>
110	<p>An employer shall post and maintain signs at entrances to or on the periphery of areas where employees may be exposed to hazardous sound levels in excess of the threshold limit.</p>
111	<p>A sign shall clearly state that a noise hazard exists and shall describe the personal protective equipment that is required.</p>
112	<p>Notwithstanding this Part, sound levels shall not affect communications for normal and emergency</p>

	operations.
113	An employee must not be exposed in sleeping quarters to a level of sound of more than 70dB.

PART 17: SANITATION AND FACILITIES	
General Workplace Sanitation	
114	Workplace must be maintained in a manner so as to minimize hazards to personnel associated with grease and oil, equipment or other potentially hazardous materials.
115	All cleaning and sweeping that may cause dusty or unsanitary conditions must be carried out in a manner that prevents the contamination of the air by dust or other substances injurious to health.
116	Each workplace must have an integrated pest management plan, including means of prevention, maintaining pest control inspection records and logs, and pesticide application logs.
117	Each enclosed part of a workplace, living accommodations and each food preparation area must be constructed, equipped and maintained, where practicable, in a manner that prevents the entrance of pests.
118	If vermin have entered any enclosed part of a workplace, living accommodation or any food preparation area, the employer must immediately take all steps necessary to control the hazard, eliminate the vermin and prevent the re-entry of the vermin.
Waste Material	
119	Waste material disposal facilities must be provided to prevent hazardous accumulation of waste material in the workplace.
120	A waste management program must be developed that addresses the proper collection, segregation, removal and handling of waste, including hazardous waste, and is in accordance with good hygiene practice.
121	Waste material containers and equipment in the dining room and food preparation areas must be: <ul style="list-style-type: none"> a) maintained in good working order and in a clean and sanitary condition; B) leakproof; C) made of material that is fire-rated; and D) fitted with seals.

	Washrooms
122	A sufficient number of washrooms available for on-shift personnel who cannot access their personal washrooms.
123	If there are multiple toilets within a washroom, then the employer must ensure that: <ul style="list-style-type: none"> a) a separate washroom is available for both male and females; and b) each toilet is partitioned to secure privacy using proper door and fastener.
124	Washrooms must be designed to ensure: <ul style="list-style-type: none"> a) It is conveniently accessible to a person’s workplace; b) it is adequately ventilated and illuminated; c) it is heated; d) it can be easily cleaned and maintained in a sanitary condition; and e) that the floor and lower 150 mm of any walls and partitions if any are water-tight and impervious to moisture.
125	Washrooms must be : <ul style="list-style-type: none"> a) kept in a clean and sanitary condition; b) provided with a sufficient supply of toilet paper; c) provided with a waste receptacle with lid, d) adequate disposal receptacles for feminine hygiene products; e) provided with clean hot and cold water or warm water; f) equipped with dispensable soap; g) provided with individual clean towels (not a common towel) or other suitable means to dry hands; h) maintained in working condition; and i) in the case of a self-contained unit, emptied and serviced at regular intervals in accordance with good hygiene practice to ensure that the unit does not overflow.
	Handwashing Facilities
126	The employer must provide and maintain for the use of employees <ul style="list-style-type: none"> a) adequate and suitable facilities for hand-washing; b) a supply of clean hot and cold or warm water; c) dispensable soap; and d) clean towels (not a common towel) or other suitable means of drying.
	Emergency Eye-wash and Showers
127	An employer shall ensure that appropriate emergency washing facilities are provided in a work area where an employee's eyes or skin may be exposed to hazardous substance.
128	The selection of emergency washing facilities shall be based upon an assessment of the risk of exposures present in the workplace and the first aid measures provided by the Safety Data Sheet for the hazardous

	substance.
129	Access to emergency washing facilities must not be blocked by material or equipment.
130	Emergency washing facilities must conform to ANSI/ISEA Z358.1, <i>American Standard for Emergency Eyewash and Shower Equipment</i> .
	Potable Water
131	Every employer must provide potable water for drinking and food preparation.
132	The employer shall develop a written potable water management program that addresses: <ul style="list-style-type: none"> a) The potable water system to be used and materials conform to the World Health Organization standard on potable water; b) Onsite qualified water operator for implementing and daily operation of the plan and system; c) Maintenance and regular cleaning of the potable water system; d) Regular microbiological and chemical testing of the water by an accredited laboratory; e) Ongoing monitoring of system, including daily residual readings, treatment device(s) operating, and ensuring that buildup of biofilms does not occur; f) Contingency plan developed and implemented in the event that water quality does not meet acceptable quality levels; g) Reporting to the workplace committee any samples that do not conform to the <i>Guidelines for Canadian Drinking Water Quality</i>; and, h) Retention of records in accordance section 18.
133	Potable water systems must be maintained, operated and tested to ensure the potable water conforms to the <i>Guidelines for Canadian Drinking Water Quality</i> .
134	If potable water is transported in portable or temporary containers, only sanitary water containers must be used.
135	If a storage container for potable water is used, <ul style="list-style-type: none"> a) The container must be constructed of a suitable material; b) the container must be securely covered and labelled that it contains potable water; c) the container must be used only for the purpose of storing potable water; and d) the water must be drawn from the container in a manner that precludes the contamination of the water.
136	Except when potable drinking water is supplied by a drinking fountain, sanitary drinking cups must be provided.
137	Any ice that is added to potable water or used for the contact refrigeration of foodstuffs must be made from potable water and must be so stored and handled as to prevent contamination.

137	If drinking water is provided by a drinking fountain, the fountain must be installed, serviced and maintained in a sanitary condition to ensure the health and safety of persons using the fountain.
	Changing Facilities
139	A changing facility must be provided by the employer and designed so that it: <ul style="list-style-type: none"> a) located adjacent to a washroom; b) Is of sufficient size to allow employees to change in and out of work clothing; c) Has sufficient sized lockers for each employee; d) Has sufficient capacity to allow for storage for gear belonging to off-rotation employees, if no other storage is available in personal cabins; and e) Provides for means of drying wet clothing, which may include access to laundry facilities.
140	Wet or contaminated work clothing must be stored in such a manner that it does not come in contact with clothing that is not wet or contaminated.
141	Work clothing must not be laundered with other (non-occupational) clothing.
	Contamination Control
142	Measures must be taken to ensure that all clothing are handled and cleaned or disposed of in a manner that prevents employee exposure to hazardous substances, infectious or offensive materials.
143	Where an employee’s skin may be contaminated by a hazardous substance, an employer shall provide a de-contamination shower facility.
144	Where there is a high risk of contamination of employees by hazardous substances, infectious or offensive materials as a part of the regular work processes at workplace, an employer shall allow sufficient time during normal working hours for an employee to use shower or other cleaning facilities.
145	Any employee while wearing clothing contaminated by a hazardous substance, infectious or offensive materials must not enter the living accommodation area unless the area is designated for removing contaminated clothing.
	Living Accommodations
146	All living accommodation must meet the following standards: <ul style="list-style-type: none"> a) it must be so constructed that it can easily be cleaned and disinfected; b) the food preparation area and dining area must be separated from the sleeping quarters; c) if a water plumbing system is provided, the system must operate under sanitary conditions; and, d) heating, ventilation and sanitary sewage systems must be provided.
147	In any living accommodation provided as sleeping quarters for employees,

	<ul style="list-style-type: none"> a) The minimum inner dimension of a bed or bunk must be 198cm by 80cm; b) a separate bed or bunk, that is not part of a unit that is more than double-tiered, must be provided for each employee; c) if the unit is double-tiered: <ul style="list-style-type: none"> i. the lower bunk or bed must be at least 30 cm above the floor; and ii. The upper bunk or bed must be placed approximately midway between the bottom of the lower bunk or bed and the ceiling. d) each bed must be constructed that it can be easily cleaned and disinfected; e) mattresses, pillows, sheets, pillow cases, blankets, bed covers and sleeping bags must be kept in a clean and sanitary condition; f) a storage area fitted with a locking device must be provided for each employee; g) a handheld emergency light is provided (flashlight); and h) a reading lamp must be provided.
148	For double-tiered bunks, an access ladder and suitable barrier for fall protection must be provided.
149	The maximum number of employees sleeping in one room is two except where emergency circumstances warrant it, special arrangements may be instituted subject to the prior approval of the Chief Safety Officer.
150	While onboard, every employee shall be assigned their own separate bed or bunk
151	Employers must maintain living accommodations in clean and sanitary condition.
152	The employer shall ensure that living accommodations are cleaned at a frequency necessary that reflects good hygiene practice.
153	Living accommodations must be so used by employees that the rooms and areas remain in as clean and sanitary a condition as is reasonably practicable.
154	A person must not use living accommodations space for the purpose of storing equipment unless a closet fitted with a door is provided in that room for that purpose.
	Food Prep, Handling and Storage
155	Where food is served in a workplace, the employer must adopt and implement a food safety program that conforms to the Canadian Food Inspection Agency's <i>Guide to Food Safety</i> .
156	Each food handler must be instructed and trained in food safety, including handling practices that prevent the contamination of food.
157	A person who is suffering from a communicable disease must not work as a food handler until the person is cleared to return to work by a qualified health professional.
158	Foods that require refrigeration to prevent them from becoming hazardous to health must be

	maintained at a temperature of 4°C or lower.
159	Foods that require freezing to prevent them from becoming hazardous to health must be maintained at a temperature of –18°C or lower.
160	Temperature logs must be maintained for freezers and hot and cold holding units.
161	Equipment and utensils used for food preparation and serving must be cleaned and stored to maintain their surfaces in a sanitary condition.
162	A person must not eat, handle, prepare or store food in any area or manner where food is likely to become contaminated or otherwise made unsafe for consumption.
	Eating Areas
163	The employer shall provide and specify appropriate designated eating areas for the safe and sanitary consumption of food.
164	The eating area shall be: <ul style="list-style-type: none"> a) kept in a clean and sanitary condition; b) of sufficient size to allow individual seating and table space for each employee using the area; c) provided with non-combustible receptacles, with no openings in the sides or bottom and with available cover, for the disposal of food waste or garbage; and d) separated from any place where a hazardous substance may contaminate food, dishes or utensils.
	Thermal Environment
165	Employers shall develop a thermal environmental program that may include the following, as applicable: <ul style="list-style-type: none"> a) regular monitoring of heat and cold stresses, b) means of communication to employees potentially exposed to heat or cold stress; c) provision of PPE and/or special equipment and clothing; d) provision of screens or shelters; e) medical supervision, hot or cold drinks and acclimatization procedures; f) limited work schedules with rest periods; g) first aid measures; and h) other appropriate controls and measures.
166	An employer shall provide appropriate and suitable monitoring equipment in a workplace where the thermal environment is likely to pose a hazard to an employee.
167	In living accommodations, the temperature and humidity must conform to <i>ASHRAE-55 Thermal Environmental Conditions for Human Occupancy</i> .
168	All marine installations, except those engaged where temperate climatic conditions do not require it,

	must be equipped with air conditioning in the living accommodation areas.
169	<p>Air conditioning systems must be designed to</p> <ol style="list-style-type: none"> a) maintain the air at a satisfactory temperature and relative humidity as compared to outside air conditions; b) ensure a sufficient number of air changes in all air-conditioned spaces; c) take account of the particular characteristics of operations at offshore; d) not produce excessive noises or vibrations; and e) facilitate cleaning and disinfection in order to prevent or control the spread of disease.
170	An open flame, machinery, boilers, associated piping systems or other high temperature sources shall be identified, installed and protected as to reduce to the risk of personnel coming into contact with the source to a level as low as reasonably practicable.
171	Where a source referred to in the Section 170 is necessarily exposed, an employee shall wear appropriate personal protective equipment.
	Ventilation
172	<ol style="list-style-type: none"> 1) Air quality and circulation of clean air must conform to ANSI/ASHRAE Standard 62.1 Ventilation for Acceptable Indoor Air Quality and ACGIH Standard Industrial Ventilation: A Manual of Recommended Practice; 2) Impurities are made harmless and inoffensive in a workplace in accordance with standards established by ASHRAE and ACGIH, as applicable.
173	Where a work or process gives off dust, fumes, vapour, mist or other impurity of a kind and quantity liable to be injurious or offensive to an employee, an employer shall provide, maintain and ensure the proper use of a ventilation system sufficient to protect the employee against inhalation of impurities and to prevent impurities from accumulating in the work space.
174	Where practicable, local exhaust ventilation shall be installed and maintained near to the point of origin of an impurity to prevent it entering the air of the work area and the breathing zone of its employees.
175	Impurities removed under sections 173 and 174 shall be exhausted clear of a work area and prevented from entering a work area.
176	The ventilation system referred to in section 173 must be so designed and operated as to maintain the air pressure in every living accommodation positive relative to any adjacent area which may contain airborne hazardous substances.
177	Exhaust from an internal combustion engine operated indoors shall be vented to the outdoors, where reasonably practicable.
178	Where mobile equipment powered by an internal combustion engine is operated indoors or in an

	<p>enclosed work area:</p> <ul style="list-style-type: none"> a) the engine shall be adequately serviced and maintained to minimize the concentration of air contaminants in the exhaust to the applicable ACGIH Standard; and b) the work area shall be monitored to determine the potential for exposure of employees to harmful levels of exhaust components.
179	Where an employee is or may be exposed to an exhaust gas component in concentrations exceeding the applicable exposure limits, exhaust gas scrubbers, catalytic converters, or other engineering controls shall be installed.
180	<ol style="list-style-type: none"> 1) Any mechanical ventilation system, including humidification equipment, <ul style="list-style-type: none"> i. must be constructed and maintained to minimize the growth and dissemination of micro-organisms, insects and mites through the ventilation system; and ii. where reasonably practicable, must be readily accessible for cleaning and inspection; 2) A competent person must inspect and maintain all parts of a mechanical ventilation system, cleans all louvers and replaces or adequately cleans all filters at a frequency that is sufficient to protect the health and safety of employees; 3) A record of all inspections, maintenance and cleaning of the mechanical ventilation system must be <ul style="list-style-type: none"> i. completed by a competent person who performs the work, and ii. readily available for examination by the occupational health and safety committee or representative; 4) When mechanical ventilation is required, the ventilating fans are located to prevent recirculation of contaminated air; and 5) Measurements of the air volume of the mechanical ventilation system are taken at suitable intervals to ensure compliance with the minimum air volume requirements conform to the standards established by ASHRAE and ACGIH.
181	Where there is a change in a work process, operation, machinery or equipment, an employer must ensure that a ventilation system is modified as required to maintain the concentration of any hazardous substance below the levels prescribed by ACGIH TLVs.
182	The ventilation system must be equipped with a device which will provide a warning when the system is not working effectively.
	PART 18: SMOKING ROOMS
183	No person shall smoke on or in a workplace except in those areas designated as ETS areas.
184	Selection of designated ETS areas shall consider:

	<ul style="list-style-type: none"> a) Proximity to fire and explosion hazards, and b) Prevention of exposure of other employees to ETS.
185	<p>When a workplace contains an ETS area it shall be constructed and operated in accordance with this section.</p> <ul style="list-style-type: none"> a) ETS areas shall be maintained under negative pressure with respect to the adjacent area. b) Separation shall be achieved by solid walls, floors, ceilings and doors equipped with automatic closing mechanism. c) Air transferred from ETS-free areas to ETS areas shall be maintained at the required rate regardless of whether or not the doors are opened or closed. d) Re-circulation shall not be permitted. e) Signage shall be posted outside each entrance stating “This Area May Contain Environmental Tobacco Smoke” f) An area previously classed as an ETS area can only be reclassified if the smoke exposure has stopped and residual ETS contaminants do not exist. g) ETS areas shall be ventilated at a rate of 50 CFM/occupant (24 L/S/occupant). h) Signage indicating maximum occupancy levels shall be placed outside each entrance to ensure the ventilation operates within design parameters.
	PART 19: STRUCTURAL SAFETY
	Access and Egress
186	Workplaces shall have safe and appropriate means of access and egress.
187	All work areas shall be arranged and maintained to allow the safe movement of employees, equipment and materials.
188	A passageway designated for pedestrian traffic shall be clearly indicated by visible markings or other means and, where practicable, floor or grade markings shall be used.
189	Practical means of emergency escape shall be provided from each work area in which work processes could create an immediate threat to employees, and where regular means of egress could be rendered dangerous or unusable.
190	Walkways intended for pedestrian traffic must be of sufficient width and height to allow for the safe passage of each employee.
191	A door shall not open directly onto a stairway, but shall open onto a floor or a landing having a width that exceeds the swing of the door.
192	Every double-action swinging door that is located in an exit, entrance or passageway used for two-way pedestrian traffic must be designed and fitted in a manner that will permit persons who are approaching

	from one side of the door to be aware of persons who are on the other side of the door.
	Guardrails
193	<p>Every guardrail must:</p> <ul style="list-style-type: none"> a) be designed and constructed to conform to the rules and codes of a recognized Classification Society; or, b) be designed and constructed to: <ul style="list-style-type: none"> i. Consist of: <ul style="list-style-type: none"> 1. a horizontal top rail not less than 900 mm and not more than 1 100 mm above the base of the guardrail; 2. a horizontal intermediate rail spaced midway between the top rail and the base of the guardrail; and 3. supporting posts spaced not more than 3 m apart at their centres; ii. withstand the greater of: <ul style="list-style-type: none"> 1. the maximum load that is likely to be imposed on it; or 2. a static load of not less than 890 N (90.8 kg-force) applied in any direction at any point on the top rail; and iii. to withstand the effects of fire.
194	Except on helicopter decks and where reasonably practicable, guardrails must be installed at every open edge where there is a fall hazard, when there is a drop of more than 1.2 m.
195	If it is not reasonably practicable to install guardrails as required by Section 194, cables or chains must be installed that meet the requirements under Section 193 or other means of protection provided that will prevent employees from falling.
	Toe Boards
196	<ul style="list-style-type: none"> 1) Subject to subsection (2), if there is a hazard that tools or other objects may fall from a raised area onto an employee, the employer must, if reasonably practicable, install <ul style="list-style-type: none"> a) a toe board that <ul style="list-style-type: none"> i. extends above the floor of the raised area, and ii. will prevent tools or other objects from falling from the raised area; or b) when the tools or other objects are piled to such a height that a toe board will not prevent the tools or other objects from falling, a solid or mesh panel that extends from the floor of the raised area to a height that will prevent the tools or other objects from falling. 2) If the installation of a toe board is not reasonably practicable on a raised area, all tools or other objects that could fall must be <ul style="list-style-type: none"> a) fastened in such a manner that, if they fall, employees beneath the platform will be protected; or b) placed in such a way that, if they fall, they will be caught by a safety net positioned so as to protect from injury any employee on or below the raised area.

	Floor and Wall Openings
197	If an employee has access to a wall opening from which there is a drop of more than 1.2 m or to a floor opening, guardrails must be fitted around the wall opening or floor opening or the opening must be covered with material capable of supporting all loads that may be imposed on it.
198	The material referred to above must be securely fastened to supporting structural member of the workplace.
	Open-top Enclosures
199	If an employee has access to an open-top enclosure from a point directly above the enclosure, the enclosure must be fitted with a fixed ladder on the inside wall of the enclosure and must be <ul style="list-style-type: none"> a) covered with a grating, screen or other covering that will prevent the employee from falling into the enclosure; or b) provided with a walkway that is not less than 500 mm wide and is fitted with guardrails.
200	A grating, screen, covering or walkway referred to above must be so designed, constructed and maintained that it will support a load that is not less than the greater of <ul style="list-style-type: none"> a) the maximum load that is likely to be imposed on it; or b) a live load of 6 kPa.
	Stairways and Ramps
201	If an employee in the course of routine work is required to move from one level to another level that is more than 450 mm higher or lower than the former level, the employer must install a fixed ladder, stairway or ramp between the levels.
202	Stairs and ramps must be designed, constructed and maintained to support any load that is likely to be imposed on them and to allow safe passage of persons and equipment on them
203	Temporary stairs must have <ul style="list-style-type: none"> a) uniform steps in the same flight; b) a slope of not more than 1.2 to 1; c) a hand rail that is not less than 900 mm and not more than 1 100 mm above the stair level on: <ul style="list-style-type: none"> i. all open sides of a stairway, ii. on one side of an enclosed stairway up to and including 1.12 metres in width; and iii. on both sides of enclosed stairways over 1.12 metres wide.
204	Where a stairway ends in direct proximity to a hazard or potential hazard, the employer must install a barricade that will protect employees using the stairway from the hazard;
205	Ramps must be <ul style="list-style-type: none"> a) securely fastened in place;

	<ul style="list-style-type: none"> b) braced if necessary to ensure their stability; and c) provided with cleats or surfaced in a manner that provides a safe footing for employees.
	Working on Decks or Bulkheads
206	Before the commencement of work which includes making an opening, in a deck, bulkhead or similar structure, the employer shall identify the location of all pipes, cable and conduits in the area where the work is to be done.
	Temporary Heat
207	<ol style="list-style-type: none"> 1) Subject to subsection (2), when a salamander or other portable heating device is used in an enclosed workplace, the heating device must not restrict a means of exit and must be <ul style="list-style-type: none"> a) so located, protected and used that there is no hazard of igniting combustible materials adjacent to the heating device; b) used only when there is ventilation provided and air quality monitored to ensure carbon monoxide levels are below the acceptable threshold limit value established by the ACGIH; and c) so located as to be protected from damage or overturning. 2) If the heating device does not provide complete combustion of the fuel used in connection with it, the heating device must be equipped with a securely supported sheet metal pipe that discharges the products of combustion outside the enclosed workplace. 3) A portable fire extinguisher that has not less than a 10B rating as defined in ULC standard ULC S508, <i>Rating and Fire Testing of Fire Extinguishers</i>, must be readily accessible from the location of the heating device when the device is in use.
	PART 20: PRESSURE AND PIPING SYSTEMS
208	Pressure and piping systems located on a marine installation or structure shall comply with the requirements outlined in Section 7.3 of the Framework Regulations (draft policy intent).
	PART 21: ELEVATORS AND MANLIFTS
	Standards
209	The design, installation, use, operation, maintenance and inspection of any elevator or manlift must conform to the rules or codes of a recognized classification society.
	Use and Operation
210	1) An elevator or manlift must only be used when loads are within the limits in which it was designed

	<p>and installed to move safely.</p> <p>2) Where an elevator or manlift is installed on a floating marine installation or structure, the elevator or manlift shall not be used or placed in service when the movement of the marine installation or structure exceeds the maximum movement recommended by the manufacturer for the safe operation of the elevator or manlift.</p>
	<p>Inspection, Testing, Maintenance and Repair</p>
211	<p>1) Every elevator and manlift must be inspected, and tested by a competent person to determine that the standards are met</p> <ul style="list-style-type: none"> a) before the elevator or manlift is placed in service; b) after an alteration to the elevator or manlift; and c) once every 12 months or per manufacturers specifications. <p>2) A record of each inspection, test and maintenance performed must:</p> <ul style="list-style-type: none"> a) be signed by the person who made the inspection, test or conducted the maintenance; b) include the date of the inspection, test or maintenance and the identification and location of the elevator or manlift; and c) set out the observations of the competent person inspecting, testing or performing maintenance on the elevator and manlift on the safety of the devices. <p>3) Capacity of the elevator and the Certificate of inspection, displaying date of inspection expiry, must be posted in elevators.</p> <p>4) Records of inspection, maintenance and testing must be retained in accordance with Section 18.</p>
	<p>PART 22: MATERIALS HANDLING</p>
	<p>Safe Lifting Program</p>
212	<p>The Employer shall develop a Safe Lifting Program, as part of the broader OHS program, that establishes safe processes with respect to the key factors that impact safe lifting operations, including marine personnel transfers, including, but not limited to the following:</p> <ul style="list-style-type: none"> a) a list of potential hazards of the work and their associated risks; b) organization, planning and performance of lifting operations, including routine and non-routine lifts; c) operational and environmental limits, such as wind, sea state, pitch, heave, roll and temperature; d) maintenance, including repairs, and inspection of lifting equipment, fixed pad eyes and loose lifting gear; e) training and competency required for people performing the work; f) a method for communicating the safe-lifting program to any person who may be affected by the

	<p>program; and</p> <p>g) management of contractors and third-party equipment owners.</p>
	<p>Training</p>
213	<p>1) Every materials handling equipment operator must be instructed and trained in the safe and proper use of the materials handling equipment in accordance with the relevant instructions provided by the manufacturer and the applicable standard and taking into account the conditions of the work place in which the equipment operator will operate the materials handling equipment.</p> <p>2) Training records must be retained in accordance with Section 18.</p>
	<p>Work Permits</p>
214	<p>A permit to work, in accordance with Part 12), is required for:</p> <p>a) all lifts, except those classified as routine; and</p> <p>b) all lifts involving personnel transfer.</p>
	<p>Lifting and Positioning Personnel</p>
215	<p>1) Materials handling equipment used for hoisting or positioning a person, must be equipped with a platform, bucket, basket or other device that is designed and certified for that purpose and is provided with a fail-safe control system that will prevent a free fall of the load that is carried.</p> <p>2) The use of materials handling equipment to undertake personnel transfers must be carried out in accordance with Part 23.</p> <p>3) Lifting equipment that is intended solely for hoisting or positioning a person must not be used for cargo or material handling purposes.</p>
	<p>Procedures</p>
216	<p>The employer must establish safe procedures for the lifting and positioning of personnel using materials handling equipment that include, at minimum, the following:</p> <p>a) the use of personal protection devices, protective clothing or other personal protection equipment by the person being lifted or positioning;</p> <p>b) the inspection and testing of the equipment to ensure that it is in safe condition;</p> <p>c) limiting the weight to no more than the safe working load;</p> <p>d) availability of fast rescue crafts for work over the water;</p> <p>e) identify training requirements of each individual assigned to plan, manage, participate in and supervise the personnel lifting or positioning operation; and,</p> <p>F) necessary communications required to be able to safely carry out the operation.</p>

	Standards
217	<p>1) The design, construction and installation of offshore cranes must be certified to:</p> <ul style="list-style-type: none"> a) API Spec 2C <i>Specification for Offshore Cranes</i>; b) EN 13852-1 <i>Cranes, Offshore Cranes, Part 1—General Purpose Offshore Cranes</i>; c) DNV GL Standards for Certification – <i>Lifting Appliances</i>; d) Lloyd’s Register <i>Code for Lifting Appliances in a Marine Environment</i>; or e) <i>ABS Guide for Certification of Lifting Appliances</i>. <p>2) The use, maintenance, inspection and operation of offshore cranes must conform to either:</p> <ul style="list-style-type: none"> a) API Standard API RP 2D, <i>API Recommended Practice for Operation and Maintenance of Offshore Cranes</i>; or b) EN 13852-1 <i>Cranes, Offshore Cranes, Part 1—General Purpose Offshore Cranes</i>.
218	<p>1) The design, construction, use, maintenance, inspection and operation of:</p> <ul style="list-style-type: none"> a) overhead and gantry cranes must conform to CSA B167 <i>Overhead travelling cranes - Design, inspection, testing, maintenance, and safe operation</i> or to the rules and codes of a recognized classification society; b) conveyors, cableways or other similar materials handling equipment must conform to ASME Standard ANSI/ASME B20.1, <i>Safety Standards for Conveyors and Related Equipment</i> or to the rules and codes of a recognized classification society;; c) forklifts must conform to either: <ul style="list-style-type: none"> i. CSA B335 <i>Safety Standard for Lift Trucks</i>; or ii. ANSI standard B 56.1 <i>Safety Standard for Powered Industrial Trucks</i>. <p>2) Inspection, maintenance, repair, and remanufacture draw works and associated equipment must conform to API <i>Recommended Practice 8B, Recommended Practice for Procedures for Inspections, Maintenance, Repair, and Remanufacture of Hoisting Equipment</i> or to the rules and codes of a recognized classification society.</p>
219	<p>1) Notwithstanding paragraph 218(1)(c), forklifts must be equipped with seat belts, a rear-view mirror, an audible warning device, operating and warning lights.</p> <p>2) Mobile equipment used on marine installations and structures involved in drilling and production must:</p> <ul style="list-style-type: none"> a) be rated for operation in a hazardous environment; and b) if equipped with an internal combustion engine, have appropriate automatic shutdowns in place to prevent it from being a source of ignition.
220	<p>1) Materials handling equipment must, to the extent that is reasonably practicable, be designed and constructed so that if there is a failure of any part of the materials handling equipment, it will not result in loss of control of the materials handling equipment or create a hazardous condition.</p> <p>2) Critical and hazardous equipment must be guarded against impact from materials handling</p>

	equipment.
	Safeguarding of Materials Handling Equipment
221	Any materials handling equipment must be so designed, constructed and operated that the equipment operator and all other employees are protected from injury by means of adequate safeguards.
	Means of Entering and Exiting
222	<p>1) Materials handling equipment must have a safe means of entering and exiting</p> <ol style="list-style-type: none"> a) the work area of the equipment operator; b) any other place on the equipment to which an employee requires regular access. <p>2) A safe means referred to in subsection (1) shall take into account:</p> <ol style="list-style-type: none"> a) the employee's body dimensions while wearing personal protective equipment and shall not require the employee to jump from the materials handling equipment; and b) emergency evacuation and rescue.
	Operating Compartment
223	The equipment within an operator's compartment must provide adequate adjustability of range to accommodate the equipment operator for the work that is required to be done.
	Controls
224	<p>1) The arrangement and design of dial displays and the controls and general layout and design of the equipment operator's compartment or position on all materials handling equipment must not hinder or prevent the equipment operator from safely operating the materials handling equipment and shall, where reasonably practicable, maximize its equipment operator's ability to collect, comprehend and process information necessary for the safe use of the equipment.</p> <p>2) Controls that are not operated from a cab shall be located to provide a safe distance between the equipment operator and the load being lifted.</p> <p>3) A pendant control for materials handling equipment shall be supported independently from its electrical conductors.</p>
	Control Systems
225	All materials handling equipment must be fitted with braking, steering and other control systems that <ol style="list-style-type: none"> a) are capable of safely controlling and stopping the movement of the materials handling equipment and any hoist, bucket or other part of the equipment; and b) respond reliably and quickly to moderate effort on the part of the equipment operator.

	Fire Protection
226	Materials handling equipment must have adequate fire protection equipment for the hazard and any fire fighting equipment installed must be readily accessible to the equipment operator.
	Vibration
227	All materials handling equipment must be so designed and constructed that the equipment operator will not be injured or the equipment operator's control of the materials handling equipment impaired by any vibration, jolting or other uneven movement of the materials handling equipment.
	Fuel Containers
228	<p>If a fuel tank, compressed gas cylinder or similar container contains a hazardous substance and is mounted on materials handling equipment, it must be</p> <ol style="list-style-type: none"> a) located or protected so that under all conditions it is not hazardous to the health or safety of an employee who is required to operate or ride on the materials handling equipment; b) connected to fuel overflow and vent pipes that are so located that fuel spills and vapours cannot be <ol style="list-style-type: none"> i. ignited by hot exhaust pipes or other hot or sparking parts, or ii. hazardous to the health or safety of any employee who is required to operate or ride in the materials handling equipment; and c) labelled on its servicing caps or covers as to its contents.
	Protection from Falling, Flying or Shifting Objects
229	<ol style="list-style-type: none"> 1) If the circumstances under which materials handling equipment is used presents a risk that the equipment operator may be struck by an intruding, falling, or flying object or shifting load, the employer must equip the materials handling equipment with a protective structure of a design, construction and strength that it will, under all foreseeable conditions, prevent the penetration of the object or load into the area occupied by the equipment operator. 2) A protective structure referred to in subsection (1) must be constructed from non- combustible or fire-resistant material and designed to permit quick exit from the materials handling equipment in an emergency. 3) Glass in doors, windows and other parts of materials handling equipment must be of a type that will not shatter into sharp or dangerous pieces on impact. 4) If glass presents a hazard, including interference with visibility, the materials handling equipment must not be used.

	Protection from Environmental Conditions
230	Materials handling equipment that is regularly used outdoors must be fitted with a roof or other structure that will protect the equipment operator from exposure to any environmental condition that is likely to be hazardous to the equipment operator's health or safety.
	Additional Protection - Mobile Equipment
231	<ol style="list-style-type: none"> 1) Guards must be installed on the deck of every marine installation and structure and all elevated working areas on which mobile equipment is used to prevent the equipment from falling over the sides of the deck or area. 2) At blind corners, mirrors must be installed that permit an equipment operator to see a person or mobile equipment approaching the blind corner.
232	<ol style="list-style-type: none"> 1) Before materials handling equipment is placed in service, a competent person shall inspect, proof test and certify in writing its rated capacity in accordance with criteria established by the manufacturer or applicable design or safety standard where <ol style="list-style-type: none"> a) the equipment is new; b) the rated capacity of the equipment cannot be determined; c) the continued safe use of the equipment cannot be assured due to its age or history; d) repairs or modifications have been made to load carrying components; e) modifications have been made which affect the rated capacity; f) the materials handling equipment has been in contact with an electric arc or current. 2) Repair, maintenance or cleaning work must not be performed on any materials handling equipment while the materials handling equipment is being operated, unless: <ol style="list-style-type: none"> a) the equipment is adequately isolated or safeguarded to protect the safety of the employee performing the repair, maintenance or cleaning work, and b) where continued operation is essential to the repair, maintenance or cleaning. 3) A report of each inspection, test or maintenance work must be completed and must: <ol style="list-style-type: none"> a) include the date of the inspection, test maintenance or repair performed; b) identify the materials handling equipment that was inspected, tested maintained or repaired; and c) set out the safety observations of the person inspecting, testing, maintaining or repairing the materials handling equipment, including safe working load of the materials handling equipment. 4) Reports must be retained in accordance with Section 18.
	General Operation
233	Any employee that is required to operate materials handling equipment or use loose lifting gear must be a competent person.

234	If tools, tool boxes or spare parts are carried on materials handling equipment, they must be securely stored.
Materials Handling Area	
235	<ol style="list-style-type: none"> 1) No person is permitted to enter a materials handling area while operations are in progress unless that person is essential to the conduct, supervision or safety of the operations. 2) The main approaches to any materials handling area must be posted with (universally recognized) warning signs and secured to avoid inadvertent access of unauthorized persons. 3) If any person other than those referred to in subsection (1) enters a materials handling area while operations are in progress, the operations in that area must be immediately discontinued and the equipment operator shall not resume work until the area is cleared of unauthorized persons.
236	<ol style="list-style-type: none"> 1) Any person operating materials handling equipment must <ol style="list-style-type: none"> a) have a clear and unobstructed view of the area in which the equipment is being operated; or b) be directed by a signaller. 2) Where the signaller in (1) has an obstructed view, a second signaller that has an unobstructed view of the area must be utilized. 3) A person must not leave materials handling equipment unattended unless the equipment has been properly secured to prevent it from moving.
Signals	
237	<ol style="list-style-type: none"> 1) A code of hand and communication signals for the purposes of section 236(1)(b) must be established prior to lifting operations and <ol style="list-style-type: none"> a) every signaller and equipment operator must be instructed in the use of the code; b) a copy of the code must be kept in a place where it is readily available for examination by the signallers, equipment operators and other employees, and c) all personnel involved in lifting operations on offshore installations, supply vessels and shore bases must know the hand signal for "emergency stop". 2) The employer must designate a competent person as the signaller. 3) A signaller must not perform duties other than signaling while any materials handling equipment under the signaller's direction is in motion. 4) A signal to stop given in an emergency by any person granted access to the work place shall be obeyed by an equipment operator. 5) Where any movement of materials handling equipment that is directed by a signaller poses a risk to

	<p>the safety of any person, the signaller shall not give the signal to move until that person is warned of, and protected from, the risk.</p> <p>6) Where the equipment operator of any materials handling equipment does not understand a signal, the equipment operator shall consider that signal to be a stop signal.</p>
	<p>Signalling Device</p>
238	<p>1) Subject to subsection (2), if it is not reasonably practicable for a signaller to use visual signals, a telephone, radio or other signalling device must be provided by the employer for the use of the signaller.</p> <p>2) If in use, two-way radio systems shall operate on a dedicated radio channel.</p>
	<p>Safe Working Loads</p>
239	<p>1) Materials handling equipment must not be used or operated with a load that is in excess of its safe working load, unless it is for the purpose of testing and inspection.</p> <p>2) The safe working load of materials handling equipment must be clearly marked on the equipment or on a label securely attached to a permanent part of the equipment in a position where the mark or label can be easily read by the equipment operator.</p> <p>3) The safe working load of fixed pad eyes and other fixed lifting points must be clearly marked on the equipment or on a label securely attached to a permanent part of the equipment in a position where the mark or label can be easily read by the equipment operator</p>
	<p>Positioning the Load</p>
240	<p>1) Where materials handling equipment is travelling with a raised or suspended load, its equipment operator shall ensure that the load is carried as close to the deck or floor as the situation permits and shall not in any case transport the load at or beyond the point at which the loaded equipment becomes unstable.</p> <p>2) Any load that has been assessed as a risk to slide on or fall from materials handling equipment resulting in a hazardous condition shall be secured to prevent such movement.</p> <p>3) Before a load is raised by materials handling equipment, the load must be inspected by a competent person to ensure it is secured to the hoist in an adequate manner by means of appropriate loose lifting gear.</p> <p>4) A load on a crane or hoist shall be safely landed and supported, before being unhooked.</p> <p>5) Tag lines or similar devices must be used to control any swinging of a load that is being lifted by a</p>

	<p>crane except when the use of the lines may be hazardous to the safety of any person.</p> <p>6) Loads must not be left hanging by a crane unless the crane operator is at the controls of the crane.</p> <p>7) A unitized load transported on a forklift shall not project a distance greater than half its height above the fork carriage, back rest or back rest extension of the forklift.</p> <p>8) No part of a load comprised of loose objects may project above the fork carriage, back rest or back extension of a forklift.</p>
	<p>Contact with Hazards</p>
241	<p>1) Subject to subsection (2), materials handling equipment must not be operated in an area in which it may come into contact with an electrical cable, any pipe or other supply line, part of a structure or other hazard known to the employer, unless the equipment operator and signaller, if applicable, have been</p> <ul style="list-style-type: none"> a) warned of the presence of the hazard; b) informed of the location of the hazard; and c) informed of the safety clearance that must be maintained with respect to the hazard in order to avoid accidental contact with it. <p>2) If an employer is unable to determine with reasonable certainty the location of the hazard or the safety clearance referred to in subsection (1), every electrical cable must be de-energized and every pipeline containing a hazardous substance must be shut down and drained before any operation involving the use of materials handling equipment commences within the area.</p>
	<p>Crane Operation</p>
242	<p>1) A crane must not be operated under conditions that are likely to create a hazard to any person, ship, aircraft, vehicle, load or structure or to the stability of the crane.</p> <p>2) A person must not move a crane in the vicinity of a helicopter deck when a helicopter is landing or taking off.</p> <p>3) An equipment operator of a crane or hoist shall not attempt to move a load where they have reason to doubt that the load can be safely handled.</p>
243	<p>1) Where applicable, every crane must</p> <ul style="list-style-type: none"> a) have posted conspicuously, and where possible, inside the crane control cab load capacity charts that specify the boom angle and safe working load for each block and for each operating mode (static, dynamic and personnel lifting), as required; b) have posted conspicuously, and where possible, inside the crane control cab approved laydown areas and restricted areas, if any; and c) be equipped with

	<ul style="list-style-type: none"> i. boom and block travel limiting devices, ii. a load measuring device that has been calibrated, at minimum, according to manufacturers' specifications, iii. a device to indicate the boom angle where the rated capacity is affected by the boom angle, and iv. a device to indicate the boom extension or load radius where the rated capacity of the equipment is affected by boom extension or load radius. <p>2) All crane hooks must be equipped with safety latches designed to prevent a load from falling out of the hook under all operating conditions.</p> <p>3) A running line sheave on a crane or hoist shall be equipped with a device to retain the rope in the sheave groove.</p> <p>4) An electrically powered crane shall have a means for the equipment operator to safely interrupt the main electric circuit under a load condition.</p>
244	A bridge, gantry, or overhead travelling crane operated by a pendant or remote control shall have markings on the crane structure or building, visible to the equipment operator, clearly indicating the direction of hook, bridge and trolley motions compatible with those marked on the controls.
	Operation of Manually Powered Hoists
245	<p>1) A hand-operated hoist shall be provided with a ratchet and pawl, load brake or other mechanism which shall hold the load at a desired height.</p> <p>2) A crank-operated winch that is not fitted with automatic load brakes shall be provided with a means of preventing the crank-handle from slipping off the crank-shaft while hoisting.</p> <p>3) A crank handle shall be removed from the crank shaft before the load is lowered on the winches referred to in subsection (2).</p> <p>4) Subsections (2) and (3) do not apply where a crank handle has been replaced by permanently secured hand wheels.</p>
	Loose Lifting Gear
246	<p>1) The design, construction, inspection, testing, maintenance and use of any loose lifting gear must be certified to the following standards, as applicable to the type of equipment being used.</p> <ul style="list-style-type: none"> a) ASME B30.9 – <i>Slings</i> b) ASME B30.10 – <i>Hooks</i> c) ASME B30.20 – <i>Below the Hook Lifting Devices</i> d) ASME B30.26 – <i>Rigging Hardware</i>

	2) Notwithstanding (1), the design, construction, inspection, testing, maintenance and use of any loose lifting gear may also be certified to an alternate standard acceptable to the Chief Safety Officer.
247	Loose lifting gear and pad eyes shall be legibly marked with the manufacturer's identification, product identifier and the safe working load.
248	<p>1) An identification system for the inspection of loose lifting gear and pad eyes must be established and maintained.</p> <p>2) Inspections of loose lifting gear and pad eyes shall be conducted by a competent third party at least every six months.</p>
249	When wire rope clips are used in loose lifting gear, only wire rope clips made from a suitable material for the intended lifting operation are permitted to be used.
250	<p>Unless specifically designed to be side-loaded:</p> <p>a) the hook or load block of a crane or hoist shall be positioned over the load to prevent side-loading of the crane when the load is hoisted;</p> <p>b) any self-locking eye hooks that has been side-loaded shall be removed from service, and not reintroduced until it has been inspected by a competent person and deemed to be fit for use.</p>
251	<p>1) Self-locking eye hooks shall not be used for hoisting personnel.</p> <p>2) Self-locking eye hooks used for other applications must have weld on trigger guards.</p>
252	Loose lifting gear shall be stored as to prevent damage when not in use.
	Manual Handling of Materials
253	If, because of the weight, size, shape, toxicity or other characteristic of materials, goods or things, the manual handling of the materials, goods or things may be hazardous to the health or safety of an employee, the employer must issue instructions that the materials, goods or things must, if reasonably practicable, not be handled manually.
	Storage of Materials
254	<p>1) All materials, goods and things must be stored and placed in such a manner that the maximum safe load-carrying capacity of the floor or other supporting structures is not exceeded and arranged in such a manner that it is stable.</p> <p>2) Materials, goods or things must not be stored or placed in a manner that may</p> <p>a) obstruct or encroach on passageways, or exits;</p> <p>b) impede the safe operation of materials handling equipment;</p> <p>c) obstruct the ready access to or the use and operation</p>

	<p>of firefighting, first aid and other emergency equipment;</p> <p>d) interfere with the operation of fixed fire protection equipment;</p> <p>e) be hazardous to the health or safety of any employee; or</p> <p>f) Obstruct electrical panels, ventilation and illumination.</p> <p>3) Cylindrical objects transported on their sides shall be effectively restrained against inadvertent movement.</p>
	<p>PART 23: PERSONNEL TRANSFER</p>
255	<p>Prior to transferring an employee, the employer must carry out a risk assessment and ensure all risks associated with the transfer are mitigated appropriately.</p>
256	<p>1) All personnel transfers require a work permit in accordance with Part 12.</p> <p>2) Notwithstanding the above, a work permit is not required for personnel transfer by fixed bridge between fixed (non-floating) marine installations or structures.</p>
	<p>Procedures</p>
257	<p>The employer must establish and implement safe procedures for the transfer of personnel that include, at minimum, the following:</p> <ul style="list-style-type: none"> a) communication between both points of transfer; b) the use of personal protection devices, protective clothing or other personal protection equipment by the person being transferred; c) the inspection and testing of the equipment to ensure that it is in safe condition; d) limiting the weight transferred to no more than the safe working load ; e) availability of fast rescue crafts f) identify training requirements of each individual assigned to plan, manage, participate in and supervise the personnel transfer operation, and g) the prohibition of the transfer of freight in personnel transfer equipment, except: <ul style="list-style-type: none"> i. where the equipment is designed for carriage of personal baggage, or ii. in an emergency.
258	<p>Any person involved in the transfer, including the person to be transferred, must be instructed in:</p> <ul style="list-style-type: none"> a) the respective procedures for their role in the transfer, and b) the use of the personnel transfer equipment.
	<p>Standards</p>
259	<p>1) Every personnel transfer equipment and every safety device attached to it must:</p> <ul style="list-style-type: none"> a) meet the requirements of the Certifying Authority for the installation; or b) Be certified to the rules or codes of a recognized classification society.

	<p>2) The personnel transfer apparatus shall be fabricated using corrosion-resistant material suitable for use in a marine environment and take into consideration the environmental conditions in the operating area (e.g. temperature, wind, sea state, etc).</p> <p>3) The personnel transfer equipment must:</p> <ul style="list-style-type: none"> a) be made of a non-collapsible construction or assembled to a non-collapsible construction b) protect personnel from injury caused by landing impact and falling, c) allow personnel to ride securely on the inside either standing or seated; d) be adequate size to accommodate a medical stretcher and one other person, e) be labelled with the maximum capacity of weight it is designed to safely carry f) be buoyant, where applicable. <p>4) A secondary safety device must be installed above the load block and the upper master link of the link assembly to ensure that there is redundancy in the event of a failure.</p> <p>5) If a workplace is designed and certified to undertake personnel transfers, it must be equipped with at least two means of personnel transfer.</p>
	Transfer
260	<p>1) Every transfer of a person must be made only when visibility and environmental conditions are such that the transfer can be made safely.</p> <p>2) Where personnel transfer is carried out using a crane:</p> <ul style="list-style-type: none"> a) the crane operator and banksman shall have a clear view of the loading and landing area b) the deck shall be clear of all cargo in loading and landing area c) Load hooks in the load path shall be capable of being locked and pinned to ensure the connecting shackle will not dislodge from the hook under any load; d) the raising or lowering of a personnel transfer equipment must, to the extent reasonably possible, be carried out over water.
261	Fast rescue craft and crew must be nearby and prepared to launch for all personnel transfer other than where personnel transfer is by fixed bridge between fixed (non-floating) marine installations or structures.
	Inspection and Testing
262	<p>Personnel transfer equipment and every safety device attached to it must be inspected and tested by a competent person:</p> <ul style="list-style-type: none"> a) before the personnel transfer equipment or the safety device attached to it is placed in service; b) after an alteration to the personnel transfer equipment or a safety device attached to it; and c) once every six months.

263	<p>1) A record of each inspection, test or servicing made must</p> <ul style="list-style-type: none"> a) be signed by the competent person who made the inspection and test or conducted the servicing; b) include the date of the inspection, test or servicing the identification and location of the personnel transfer equipment and safety device that were inspected, tested or servicing; and c) set out the observations of the competent person on the safety of the devices. <p>2) Every record must be retained in accordance with Section 18.</p>
	<p>Repair and Maintenance</p>
264	<p>Repair and maintenance of personnel transfer apparatus and safety devices attached to them must be performed by a competent person.</p>
	<p>PART 24: LADDERS</p>
	<p>Fixed ladder design requirements</p>
265	<p>Subject to section 267, a fixed ladder that is more than 6 m in length must, where reasonably practicable, be fitted with a protective cage for that portion of its length that is more than 2.44m above the base level of the ladder.</p>
266	<p>Subject to section 267, a fixed ladder that is more than 9 m in length must have, at intervals of not more than 6 m, a landing or platform that</p> <ul style="list-style-type: none"> a) is not less than 0.36 m² in area; and b) is fitted at its outer edges with a guardrail.
267	<p>A fixed ladder, cage or landing referred to in sections 265 or 266 must be designed and constructed to withstand all loads that may be imposed on it.</p>
268	<p>1) A fixed ladder must be</p> <ul style="list-style-type: none"> a) vertical; b) securely held in place at the top, bottom and at intervals not more than 3m for the entire length of the ladder; and c) fitted with <ul style="list-style-type: none"> (i) rungs that are at least 150 mm from the wall and uniformly spaced at intervals not more than 300 mm, and (ii) side rails that extend not less than 1m above the landing or platform. <p>2) Additionally, the ladder rungs must not impede the employee from safely exiting the ladder onto the platform or landing, if it is fitted with side rails.</p>
269	<p>Sections 265 and 266 do not apply to a fixed ladder that is used by an employee wearing with a fall</p>

	arrest system.
270	A ship's ladder shall be engineered.
	Portable ladders
271	<p>1) Portable ladders must conform to the requirements set out in one of the following standards:</p> <ul style="list-style-type: none"> a) CSA Standard CAN3-Z11 <i>Portable Ladders</i>; or b) ANSI/ALI Standard A14.2, <i>American National Standard for Ladders - Portable Metal - Safety Requirements</i> <p>2) Portable ladders used on ships used for seismic, geotechnical, construction or diving may alternatively conform to ANSI/ALI Standard A14.1 <i>American National Standard for Ladders - Wood - Safety Requirements</i>.</p>
272	Notwithstanding Section 271, an employer shall ensure all portable ladders used in the workplace have a load capacity greater than 250lbs/113.4kg
273	Notwithstanding Section 271, ladders, other than those used as part of a scaffold system, shall be made of a non-combustible material on marine installations and structures used for the drilling for and production of petroleum products.
	Ladder (fixed and portable) Use
274	<p>Subject to section 276 every portable ladder must, while being used,</p> <ul style="list-style-type: none"> a) be placed on a firm and stable footing; b) be secured in such a manner that it cannot be dislodged accidentally from its position; c) the upper support of the side rails shall be rested on a bearing surface strong enough to safely withstand the applied load; and d) if equipped with locks, have the locks engaged before the ladder is climbed.
275	Every ladder, whether fixed or portable, must be positioned in a manner so that it is not necessary for a person to use the underside of the ladder.
276	When a fixed or portable ladder provides access from one level to another the ladder must extend, if reasonably practicable, at least three rungs above the higher level or, if it is not reasonably practicable, handholds must be provided.
277	A metal or wire-bound fixed or portable ladder must not be used if there is a hazard that it may come into contact with any live electrical circuit or equipment.
278	An employee must not perform work from any of the three top rungs of any single or extension portable ladder or from either of the two top steps of any stepladder.

279	A non-metallic fixed or portable ladder must not be coated with a material that may hide flaws that may impact the integrity of the ladder.
280	The employer shall ensure that the working surface of a ladder used by an employee must, if reasonably practicable, be kept free of grease, oil or other slippery substance and of any material or object that may cause an employee to slip or trip.
281	When a portable ladder is used, it must not be <ul style="list-style-type: none"> a) placed in front of or against a door that can be opened unless the door is blocked in the open position, locked or guarded; b) used as a scaffold component or as a horizontal walkway, ramp or work platform support except where the ladder is part of a premanufactured or engineered system; c) joined together with another ladder to increase its length, unless the manufacturer's instructions permits; d) located in an elevator shaft or hoistway when such space is being used for hoisting e) located near moving equipment under a load f) used in a way which may compromise its stability or the stability of the person performing work on the ladder.
282	An employee may only work from a-portable ladder less than 3 m in height without fall protection where <ul style="list-style-type: none"> a) the work is a light duty task of short duration at each location; b) the employee's centre of gravity is maintained between the ladder side rails; and c) the ladder is not positioned near an edge or floor opening that would significantly increase the potential fall distance.
283	While ascending or descending a fixed or portable ladder, an employee shall <ul style="list-style-type: none"> a) maintain a three-point contact with the ladder; b) face the ladder; and c) carry any tools, equipment or materials in a pouch or holster or in any other secure manner.
PART 25: SCAFFOLDING AND STAGING	
General Requirements	
284	An employee must not work on a scaffold, stage or work platform in environmental conditions that are likely to be hazardous to the health or safety of the employee, except when the work is required to remove a hazard or to rescue an employee.
285	An employee must not use a scaffold, stage or elevating platform unless <ul style="list-style-type: none"> a) the employee has authority from the employer to use it; b) the employee has been trained and instructed in its safe and proper use; and c) it has been inspected and certified fit for use by a competent person.

286	<p>If a person or equipment may come into contact with a scaffold, stage or elevating platform in such a way that poses a hazard:</p> <ul style="list-style-type: none"> a) a barricade must be installed around it to prevent any such contact; or b) where it is impractical to install a barricade other acceptable means of protection must be provided to prevent contact
	Scaffolds
287	The design, erection, maintenance, inspection, dismantling and storage of a scaffold shall be under the direction of a competent person and shall conform to CSA Z797, <i>Code of Practice for Access Scaffold</i> .
288	In addition to the certification requirements under the standard in section 287, where a scaffold is used to support a temporary floor or is subject to loads which can cause overturning, the scaffold shall be erected and used in accordance with the written instructions of a professional engineer.
289	Ladderjack scaffolds must not be used at a workplace.
290	<p>Every scaffold must:</p> <ul style="list-style-type: none"> a) be capable of supporting at least four times the load that is likely to be imposed on it; or b) be subjected to engineering design/review and approved by a professional engineer, and comprised of systems, components and/or materials that have been manufactured in accordance with a quality system regime.
291	Where reasonably practicable, manufactured platforms must be used.
292	Platforms or planks used in scaffolding systems must be adequately secured and fitted.
293	All wooden materials used in scaffolding must be treated with a transparent fire retardant coating to reduce likelihood of combustion.
294	Where vertical ladders are used on scaffolds greater than 9m in total height, rest platforms must be provided at least every 6.1 metres and must be fully guarded except at the ladder location.
295	Requirements for fall protection apply to the erection and dismantling of a scaffold.
296	The employer shall ensure that all components of scaffold are compatible with each other.
297	<ol style="list-style-type: none"> 1) A running scaffold shall have internal horizontal cross-bracing installed in the bay immediately adjacent to and at the level of a building tie unless equivalent bracing is achieved by use of fabricated scaffold planks secured by end hooks to provide a fully decked work platform at this level. 2) A double-pole tube and coupler scaffold shall have internal bracing in accordance with subsection (1).

	Elevating Work Platform
298	The use of any self-propelled or mobile elevating work platforms must be approved by the CSO.
299	A person on an elevating work platform shall wear a personal fall arrest system secured to an anchorage point that is approved by the manufacturer or professional engineer.
300	The rated capacity of an elevating work platform <ol style="list-style-type: none"> a) shall be marked on the platform; and b) shall not be exceeded.
301	<ol style="list-style-type: none"> 1) Controls on an elevating work platform shall be 'hold-to-run' (continuous pressure) type that return to the neutral or stop position when released. 2) An emergency stop devices shall be red in colour and located within easy reach of the elevating work platform operator.
302	An elevating work platform lifting mechanism which creates a shear hazard to employees shall be adequately guarded or identified with signs, decals or similar markings warning of the hazard.
	PART 26: ROPE ACCESS
303	Where rope access work is being used, a rope access program must be established and maintained, as part of Employer's OHS program required under the Act, and must conform to the International Code of Practice, published by the Industrial Rope Access Trade Association (IRATA).
304	In the International Code of Practice, "should" must be read as expressing a mandatory requirement for a rope access program unless deemed not reasonably practical to do so. If deemed not reasonably practical, the employer must demonstrate to the Board prior to undertaking the activity that adequate controls are in place to mitigate or eliminate risks associated with the task.
305	An employer must ensure that only rope access technicians engage in rope access work at a workplace.
306	The Employer must develop a rope access safe-work plan, which must be based on a hazard assessment of the specific work area and must include, at minimum, the following information: <ol style="list-style-type: none"> a) a list of the potential hazards associated with the work to be performed and their associated risks; b) how the hazards will be eliminated or controlled; c) the rope access system to be used at the work area; d) the procedures to be used to assemble, maintain, inspect, use and disassemble the rope access system; e) a list of persons who will be working in the work area, including each person's name and their

	<p>duties;</p> <p>f) the appropriate personal protective equipment to be used to perform the work;</p> <p>g) an emergency response plan, including rescue operations, to be followed at the work area;</p> <p>h) an access and rigging plan for how to rig the ropes and gain access to the work position,</p>
307	A rope access technician must keep a logbook that conforms to the IRATA requirements.
308	<p>An employer must ensure that equipment used in rope access is designed, installed and certified to, and maintained and used in conformance with, to the standards referenced in the IRATA Code of Practice or with the following standards, as applicable:</p> <p>a) CSA standard CSA Z259.1, <i>“Body Belts and Saddles for Work Positioning and Travel Restraint”</i>;</p> <p>b) CSA standard CSA Z259.10, <i>“Full Body Harnesses”</i>;</p> <p>c) CSA standard CSA Z259.11, <i>“Energy Absorbers and Lanyards”</i>;</p> <p>d) CSA standard CSA Z259.12, <i>“Connecting Components for Personal Fall Arrest Systems (PFAS)”</i>;</p> <p>e) CEN standard EN 567, <i>“Mountaineering Equipment – Rope clamps – Safety requirements and test methods”</i>;</p> <p>f) CEN standard EN 353-2, <i>“Personal protective equipment against falls from height – Part 2: Guided type fall arresters including a flexible anchor line”</i>.</p>
309	<p>An employer must ensure that each component of a rope access system is compatible with all of the following, as indicated in the manufacturer’s specifications and instructions for use of their equipment:</p> <p>a) each other component, and that the safe function of any component does not interfere with the safe function of another component;</p> <p>b) the work conditions and conditions of the physical environment under which the equipment is to be used.</p>
310	<p>An employer must ensure that all anchorages used as a component of a rope access system are capable of withstanding the following forces in any direction in which the force may be applied:</p> <p>a) 22 kN (2243kg-force), for non-engineered; or</p> <p>b) 2 times the maximum arresting force anticipated, for an engineered system.</p>
311	<p>An employer must ensure that a rope access technician wears protective headwear that is appropriate to the hazards and conforms to one of the following:</p> <p>a) CSA standard CSA Z94.1, <i>“Industrial Protective Headwear”</i>;</p> <p>b) ANSI standard ANSI Z89.1, <i>“American National Standard for Industrial Head Protection”</i>;</p> <p>c) CEN standard EN 12492, <i>“Mountaineering equipment – Helmets for mountaineers – Safety requirements and test methods”</i>.</p>
312	A work permit, in accordance with Part 12 is required for all rope access activities.
	PART 27: FALL PROTECTION
313	Fall protection is required if an employee is at risk of falling from a work area that is:

	<ul style="list-style-type: none"> a) 3 m or more above the nearest safe surface or water; or b) less than 3 m and the work area is above one of the following: <ul style="list-style-type: none"> i. a surface or thing that could cause injury to the person, ii. above an open-top enclosure containing a hazardous material.
314	<p>If fall protection is required, an employer must ensure that at least one of the following means of fall protection on is used, as appropriate in the circumstances:</p> <ul style="list-style-type: none"> a) a guardrail; b) temporary flooring; c) a travel restraint system; d) a fall-arrest system; e) a personnel safety net; f) other means of fall protection that provides a level of safety equal to or greater than a fall arrest system that meets the requirements of Section 317.
315	<p>Where fall protection is required, a fall protection program must be established and maintained, as part of Employer’s OHS program required under the Act, and must, at minimum, include:</p> <ul style="list-style-type: none"> a) a list of potential fall hazards of the work and their associated risks; b) the fall-protection system or systems to be used at the work area; c) reference to applicable sections of the Accord Act and these regulations; d) written procedures that address: <ul style="list-style-type: none"> i. the risks associated with the potential for swing as a result of anchorage placement when a person is using a fall-arrest system ii. the assembly, maintenance, inspection, use and disassembly of a fall-protection system, as applicable iii. the rescue of a person who falls and requires rescue, including if a person is suspended by a fall-arrest system or personnel safety net e) schedules for inspecting any fall-protection systems; f) the training and qualifications required for persons who will perform the work g) a method for communicating the fall-protection safe-work program to any person who may be affected by the program
316	<p>Where an employee is required to wear a fall-arrest system or a travel restraint system, a work permit is accordance with Part 12.</p>
317	<p>The components of a fall-arrest system must be certified to the following standards, as applicable:</p> <ul style="list-style-type: none"> a) CSA Z259.17 <i>Selection and Use of Active Fall Protection Equipment and Systems</i>; b) CSA Standard Z259.2.5, <i>Fall Arresters and Vertical Lifelines</i>; c) CSA Standard Z259.2.4 <i>Fall Arresters and Vertical Rigid Rails</i>; d) CSA Standard Z259.1, <i>Body Belts and Saddles For Work Positioning and Travel Restraint</i>; e) CSA Standard Z259.2.2, <i>Self-Retracting Devices</i>; f) CSA Standard Z259.2.3, <i>Descent Devices</i>; g) CSA Standard Z259.11, <i>Energy Absorbers and Lanyards</i>; h) CSA Standard Z259.12, <i>Connecting Components for Personal Fall Arrest Systems (PFAS)</i>;

	<ul style="list-style-type: none"> i) CSA Standard Z259.13, <i>Flexible Horizontal Lifeline Systems</i>; j) CSA Standard Z259.16, <i>Design of Active Fall Protection Systems</i>; k) CSA Standard Z259.10, <i>Full Body Harnesses</i>; l) CSA Standard CSA Z259.15, <i>Anchorage Connectors</i>.
318	<p>An employer must ensure that all anchorages used as components of a fall-protection system capable of withstanding the following forces in any direction in which the force may be applied:</p> <ul style="list-style-type: none"> a) 22 kN (2243kg-force); or b) 2 times the maximum arresting force anticipated, for an engineered system.
319	<p>Unless a self-retracting lifeline is used, an employer must ensure that a lanyard used in a fall-arrest system is equipped with an energy absorber, unless all of the following conditions are met:</p> <ul style="list-style-type: none"> a) the fall-arrest system is designed by a competent person to limit the free fall to less than 1.2 m and 4 kN (408 kgf) arresting force; b) the fall-arrest system does not permit the user to contact an unsafe surface.
320	<p>An employer must ensure a self-retracting device used as a component of a fall-protection system is:</p> <ul style="list-style-type: none"> a) anchored above the user's head unless the manufacturer's specifications allow using a different anchorage location; and b) used in a manner that <ul style="list-style-type: none"> i. minimizes the hazards of swinging, and ii. if the user falls, limits the distance they drop during the swing to less than 1.2 m.
321	<p>An employer must ensure that each component of a fall-protection system is compatible with all of the following, as indicated in the manufacturer's specifications and instructions for use of their equipment:</p> <ul style="list-style-type: none"> a) each other component and that the safe function of any component does not interfere with the safe function of another component; b) the work conditions and conditions of the physical environment under which the equipment is to be used.
322	<p>Unless otherwise prescribed in these regulations, an employer must ensure a work-positioning system is used in combination with a fall-arrest system in all of the following circumstances:</p> <ul style="list-style-type: none"> a) the centre of gravity of the person using the work-positioning system extends beyond the edge from which a person could fall; b) the state or condition of the work surface creates a slipping or tripping hazard.
323	<p>A person must not use, and an employer must ensure a person does not use, a work-positioning system as a means of fall arrest.</p>
324	<ul style="list-style-type: none"> 1) This section does not apply to safety nets used in and around the helicopter landing deck area of a marine installation. 2) An employer must ensure that the design, construction, manufacture, installation, use, inspection and testing of a personnel safety net used as a means of fall protection is certified to ANSI/ASSE

	<i>A10.11 Safety Requirements for Personnel & Debris Nets</i>
325	<p>Notwithstanding any requirements set out in the standard required by the above, a personnel safety net must be erected and installed in accordance with all of the following:</p> <ul style="list-style-type: none"> a) it must be erected and installed under the supervision of a competent person; b) it must be positioned as close as reasonably practicable, but no more than 4.6 m below the work area and extend at least 2.4m on all sides beyond the work area; c) When used under a gangway, it must extend on both sides of the gangway for a distance of at least 1.8m; d) it must be positioned and maintained so that when arresting the fall of a person, the maximum deflection of the personnel safety net does not permit any portion of the person to contact another surface; e) it must be kept free of debris, obstructions or intervening objects that may be struck by a person who falls from a workplace into the net; and f) where connected to another personnel safety net, the splice joints connecting it with the other personnel safety nets are equal to, or greater in strength than, the strength of the weakest of the personnel safety nets.
326	<ul style="list-style-type: none"> 1) Employees and/or supervisors, as the case may be,- must successfully complete training on fall arrest systems: <ul style="list-style-type: none"> a) before they do any of the following: <ul style="list-style-type: none"> i. use of a fall arrest system, ii. work in, supervise or plan the work for a work area where a fall arrest system required; and b) once at least every 3 years. 2) Training must be instructed by a competent person. 3) The person conducting the training must identify a method of evaluating the person taking the training and determining whether a person successfully completes the training. 4) In order to successfully complete training, a person must be deemed competent to inspect and use fall protection by one of the following persons who conducted the training: <ul style="list-style-type: none"> a) their employer; b) a training organization.
327	<p>Every employee working where fall arrest is required must complete a fall arrest training program that includes, at minimum, the following components:</p> <ul style="list-style-type: none"> a) a review of all applicable health and safety legislation, regulations and standards, including roles and responsibilities of workplace parties; b) importance of fall protection training; c) identification of fall hazards; d) review of the hierarchy of controls that may be used to eliminate or minimize risk of injury from a fall;

	<ul style="list-style-type: none"> e) the different methods of fall protection and the most suitable application of the methods; f) fall-protection and safe-work procedures; g) instruction on assessing and selecting specific anchors that may be used for various applications; h) instruction on selecting and correctly using fall-protection components, including connecting hardware; i) information about the effect of a fall on the human body, including all of the following: <ul style="list-style-type: none"> i. free fall, ii. swing fall, iii. maximum arresting force, and iv. the purpose of energy absorbers, j) pre-use inspections of equipment and systems; k) the use, care, storage, maintenance and inspection of fall protection systems, equipment and components, l) emergency response procedures to be used if a fall occurs; m) practice in all of the following: <ul style="list-style-type: none"> i. inspecting, fitting, adjusting and connecting fall-protection systems and components, ii. the emergency response procedures required by clause (l).
328	Fall protection training records must be retained in accordance with Section 18.
	PART 28: ELECTRICAL SAFETY
	Electrical Safety Program
329	<ol style="list-style-type: none"> 1) An electrical safety program shall be developed and implemented, as part of the Employer's OHS program, which directs activity appropriate to the risk associated with electrical hazards. 2) Electrical safety program shall, at minimum, address the following principles: <ol style="list-style-type: none"> a) hazard identification and risk assessment; b) assignment of duties and responsibilities; c) inspecting and evaluating the electrical equipment; d) maintaining the electrical equipment's insulation and enclosure integrity; e) planning every job and document first-time procedures; f) de-energizing if possible; g) reasonably foreseeable unscheduled events; h) identifying hazardous areas in which an explosive atmosphere may occur; i) identifying the electrical hazards and arc flash hazards, and reducing associated risk; j) protecting the employee from shock, burn, blast, and other hazards due to the working environment; k) necessary protective equipment and devices; l) using the right tools for the job;

	<ul style="list-style-type: none"> m) assessing people’s abilities and necessary training appropriate for the activity; n) Procedures for multiple power systems, where applicable; o) emergency procedures training and equipment; p) auditing the principles specified within the program; q) Approach boundaries appropriate to the electrical design and installation of the given workplace; r) Safe work procedures for testing electrical equipment and circuits; and s) the number of competent persons present while work is being performed.
330	Hazardous areas identified in paragraph 329(2)(h) shall be classified according to a comprehensive and documented classification system including design and selection of systems and equipment to manage ignition sources and prevent fire and explosion.
331	<ul style="list-style-type: none"> 1) The employer shall ensure that a competent person <ul style="list-style-type: none"> a) creates and maintains electrical drawings that includes line diagrams that describes the position and the ratings of the components of the electrical installation; and b) updates the electrical drawings to reflect all repairs or alterations to the electrical system 2) The electrical drawings shall be readily accessible in the workplace.
332	Employees exposed to electrical hazards shall be trained in and familiar with any electrical safety related practices necessary for their safety.
333	<ul style="list-style-type: none"> 1) Workplaces designed, constructed and installed in accordance with the Canadian Electrical Code must conform to the approach boundaries identified in Tables 3A and 3B. 2) If the workplace is not designed and constructed in accordance with the Canadian Electrical Code, the approach boundaries identified in Tables 3A and 3B must be adapted to take into consideration the given electrical design and installation. 3) Adapted approach boundary tables must be included in the Electrical Safety Program required under subsection 329(1).
	Qualified Electrical Person
334	<ul style="list-style-type: none"> 1) Any person who installs, repairs, alters, or tests electrical equipment must be a qualified electrical person. 2) Only a qualified electrical person may work within the approach boundaries, identified in in the Electrical Safety Program, of exposed energized electrical conductors and circuit parts or identified arc flash boundaries. 3) An employee who is undergoing on-the-job training for the purpose of obtaining the skills and knowledge necessary to be considered a qualified electrical person and who, in the course of such

	training, demonstrates an ability to perform specific duties safely at his or her level of training and who is under the direct supervision of a qualified electrical person shall be considered to be a qualified electrical person for the performance of those duties.
	Working on Electrical Equipment
335	<ol style="list-style-type: none"> 1) If electrical equipment is energized or may become energized, an employee must not work on the equipment unless the equipment is isolated in accordance with Part 29. 2) Notwithstanding the above, where work must be conducted on equipment in an energized state due to equipment design or operational limitations, then: <ol style="list-style-type: none"> a) work permit is required that shall be in accordance with Part 12; and b) the employer must develop and the work must be carried out in accordance with safe work procedures. 3) In addition to subsection (2), in the case of work being carried out on energized power systems (which includes a plant and equipment essential to the generation, transmission or distribution of power), the permit to work is signed by the Offshore Installation Manager (OIM), or equivalent level position aboard the marine installation or structure, or a competent person that has been designated to represent the OIM or equivalent position;
	Work within Approach Boundaries
336	Exposed energized electrical conductors and circuit parts must be put into an electrically safe work condition, in accordance with Part 29, before an employee works within the limited and restricted approach boundary of those conductors or parts.
	Work Permits
337	<p>A permit to work, in accordance with Part 12 is required :</p> <ol style="list-style-type: none"> a) Where it is not possible in section 336 to put exposed energized electrical conductors and circuit parts into an electrically safe work condition due to equipment design or operational limitations, or b) When the employee works within the vicinity of conductors or circuit parts that are not exposed but an increased likelihood of injury from an exposure to an arc flash hazard or electric hazard exists.
	Arc flash
338	<p>Where the risk assessment indicates a potential for arc flash hazard:</p> <ol style="list-style-type: none"> a) Arc flash boundaries must be determined using an appropriate method; b) Controls must be identified and put in place to protect against injury.
339	1) Electrical equipment must protect against electrical hazard by guarding, insulating, grounding or other means of protection.

	<p>2) Where an employee must work within the limit approach boundaries because of the circumstances of work or the inadvertent movement of persons or equipment and where guarding is used:</p> <ul style="list-style-type: none"> a) equipment shall not touch the guarding; and b) a safety watch in accordance with Section 342 shall be used.
	<p>Insulated Tools and Equipment</p>
340	<p>1) Qualified electrical persons shall use insulated tools and/or handling equipment when they are working inside the restricted approach boundary of exposed energized electrical conductors or circuit parts where tools or handling equipment might make accidental contact.</p> <p>2) The following requirements shall apply to insulated tools and equipment:</p> <ul style="list-style-type: none"> a) Insulated tools shall be rated for the voltages on which they are used; b) Insulated tools shall be designed and constructed for the environment to which they are exposed and the manner in which they are used; and c) Insulated tools shall be protected from damage to the insulating material.
	<p>Test Instruments and Equipment</p>
341	<p>1) Only qualified electrical persons shall perform tasks where an electrical hazard exists, including but not limited to testing, troubleshooting, voltage measuring within the limited approach boundary or arc flash boundary of energized electrical conductors or circuit parts.</p> <p>2) Test instruments, equipment, and their accessories shall:</p> <ul style="list-style-type: none"> a) Be rated for circuits and equipment where they are utilized; b) Be designed for the environment to which they will be exposed; c) be designed for the manner in which they will be utilized; and d) conform with an appropriate standard.
	<p>Electrical Safety Watcher</p>
342	<p>If an employee is working on or near exposed energized electrical conductors and circuit parts and, because of the nature of the work or the condition or location of the workplace, it is necessary for the safety of the employee that the work be observed by a person not engaged in the work, the employer must appoint an Electrical Safety Watcher:</p> <ul style="list-style-type: none"> a) to warn all employees on or near an energized electrical installation of the hazard; b) to ensure that all safety precautions and procedures are complied with; c) Who is authorized to stop immediately any part of the work that they consider dangerous; and d) Who is free of any other duties that might interfere with their duties as a watcher.
343	<p>If an employee or another person, including every electrical safety watcher, is associated with work on electrical equipment, the employee or other person must be fully informed by the employer with respect to the safe coordination of their work.</p>

	Electrical Room
344	<ol style="list-style-type: none"> 1) Electrical rooms shall not be used for storing unrelated, flammable, explosive or combustible materials. 2) The working space around and the path of access to every electrical switch, energy-isolating device or meter must be free from obstruction and arranged to give authorized persons ready access to all parts requiring attention. 3) Volatile flammable substance shall not be used in an electrical room or confined area where high voltage electrical current is a hazard.
345	Legible safety signs written in the official operating language of the workplace with symbols to convey the same meaning must be used where necessary to warn others about electrical hazards.
346	<ol style="list-style-type: none"> 1) All electrical equipment within a hazardous area must be certified and marked as suitable for the conditions in that location. 2) Each extension cord of the electrical equipment located within a hazardous area must be equipped with a terminal that provides an interruption of the circuit before a connecting device is withdrawn.
	Defective Electrical Equipment
347	<p>Defective equipment shall be:</p> <ol style="list-style-type: none"> a) immediately repaired; b) safely isolated or quarantined until the equipment is restored to proper working order; or c) permanently disconnected.
	Electrical Equipment Damage
348	Electrical equipment shall be installed and guarded so that adequate provision may be made for the safety of persons and property and for the protection of the electrical equipment from mechanical damage or other damages to which it is liable to be exposed.
	Grounded Electrical Equipment
349	<p>The following requirements shall apply to grounding-type equipment:</p> <ol style="list-style-type: none"> a) A flexible cord used with grounding-type utilization equipment shall contain an equipment grounding conductor. b) Attachment plugs and receptacles shall not be <ol style="list-style-type: none"> i. connected or altered in a manner that might interrupt continuity of the equipment grounding conductor; or ii. altered to allow use in a manner not intended by the manufacturer. c) Adapters that interrupt the continuity of the equipment grounding conductor shall not be used.

TABLE 3A – Approach Boundaries for AC Systems**Approach Boundaries to Energized Electrical Conductors or Circuit Parts for Shock Protection for AC Systems
(distance from energized electrical conductors or circuit parts to employee)**

Nominal System Voltage Range, phase to phase ^α	Limit Approach Boundary		Restricted Approach Boundary (includes inadvertent movement adder)
	Exposed Moveable Conductor ^β	Exposed Fixed Circuit Part	
Less than 50 V	Not specified	Not specified	Not specified
50 V – 150 V ^δ	3.0 m	1.0 m	Avoid contact
151 V – 750 V	3.0 m	1.0 m	0.3 m
751 V – 15 kV	3.0 m	1.5 m	0.7 m
15.1 kV – 36 kV	3.0 m	1.8 m	0.8 m
36.1 kV – 46 kV	3.0 m	2.5 m	0.8 m
46.1 kV – 72.5 kV	3.0 m	2.5 m	1.0 m
72.6 kV – 121 kV	3.3 m	2.5 m	1.0 m
138 kV – 145 kV	3.4 m	3.0 m	1.3 m
161 kV – 169 kV	3.6 m	3.6 m	1.3 m
230 kV – 242 kV	4.0 m	4.0 m	1.7 m
345 kV – 362 kV	4.7 m	4.7 m	2.8 m
500 kV – 550 kV	5.8 m	5.8 m	3.6 m
765 kV – 800 kV	7.2 m	7.2 m	4.9 m

^α For Single Phase Systems above 250 V, select the range that is equal to the system’s maximum phase to ground voltage times 1.732

^β A condition in which the distance between the conductor and a person is not under the control of the person. This is normally applied to overhead line conductors supported by poles.

^δ This includes circuits where the exposure does not exceed 120 V.

TABLE 3B – Approach Boundaries for DC Systems**Approach Boundaries to Energized Electrical Conductors or Circuit Parts for Shock Protection for DC Systems
(distance from energized electrical conductors or circuit parts to employee)**


Nominal System Voltage Range, phase to phase	Limit Approach Boundary		Restricted Approach Boundary (includes inadvertent movement adder)
	Exposed Moveable Conductor ^β	Exposed Fixed Circuit Part	
Less than 100 V	Not specified	Not specified	Not specified
100 V – 300 V	3.0 m	1.0 m	Avoid contact
301 V – 1 kV	3.0 m	1.0 m	0.3 m
1.1 kV – 5 kV	3.0 m	1.5 m	0.4 m
5.1 kV – 15 kV	3.0 m	1.5 m	0.7 m
15.1 kV – 45 kV	3.0 m	2.5 m	0.8 m
45.1 kV – 75 kV	3.0 m	2.5 m	1.0 m
75.1 kV – 150 kV	3.4 m	3.0 m	1.2 m

150.1 kV – 250 kV	4.0 m	4.0 m	1.6 m
250.1 kV – 500 kV	6.0 m	6.0 m	3.5 m
500.1 kV – 800 kV	8.0 m	8.0 m	5.0 m

^β A condition in which the distance between the conductor and a person is not under the control of the person. This is normally applied to overhead line conductors supported by poles.

	PART 29: CONTROL OF HAZARDOUS ENERGY: LOCKOUT AND OTHER METHODS
	General
350	Any activities involving the control of hazardous energy must conform to <i>CSA Z460 Control of Hazardous Energy-- Lockout and other methods</i> .
351	A Hazardous Energy Control program must be established, implemented and maintained that conforms to the program requirements in <i>CSA Z460 Control of Hazardous Energy-- Lockout and other methods</i> .
	Permit to Work with Hazardous Energy
352	A work permit is required for any work involving hazardous energy in accordance with Part 2.
	General requirement
353	If the unexpected start-up of machinery or equipment, system or process or release of stored energy, including during the course of maintenance and repair, could result in injury, the energy source must be identified, isolated, de-energized, locked out and tagged out or otherwise effectively controlled.
354	<ol style="list-style-type: none"> 1) Every energy-isolating device must be so designed and located as to permit quick and safe operation at all times. 2) All Energy-isolating devices must be clearly labelled or identified to indicate their function, in accordance with the nomenclature and/or identifiers used in the procedures that specify their use. The identification shall correspond to the applicable drawings. 3) When an energy isolating device is locked out, the device must not prevent access to other energy isolating devices.
	Lock-out Tag-out
355	<ol style="list-style-type: none"> 1) For each machine, piece of equipment, system or process, detailed written instructions for the control of hazardous energy must be issued to the authorized individuals conducting the work for review and use.

	<p>2) The instructions referred to in subsection (1) must specify</p> <ul style="list-style-type: none"> a) the procedures to be followed for shutting down, isolating, blocking, securing, and relieving stored or residual energy ; b) the machine, equipment or process to which the instructions apply; c) considerations regarding all required remote and local isolations; d) requirement for verifying that isolation and de-energization have been accomplished; e) any other tests to be performed; f) the procedural steps for placing and removing lockout devices g) the particulars of the tags or signs to be used; h) the required energy-isolating devices and their locations; i) the method of determining that all persons near the locked out machine, equipment, tool or electrical installation are clear of any hazard and have been instructed to remain clear before the machine, equipment, tool or electrical installation, or any part of it, is energized; j) the method of notifying a person in the work area of safe conditions for work after a lock-out has been completed; k) The requirements for the machine, equipment, or process to be inspected to ensure that it is ready for return to service. <p>3) A tag or sign referred to in subsection (2)(g) must</p> <ul style="list-style-type: none"> a) Identify the machine, equipment, or process supplied and energy type; b) Have words directing the person not to start or operate the machine, equipment or process, or display a symbol conveying the same meaning; c) show the date and time at which the machine, equipment, or process was locked out; d) show the name of the employee who applied the lockout; e) Reason for lockout; f) be removed only by the employee who attached it or in accordance with the handover instructions as defined in the lockout procedure in accordance with section 365(5); g) not readily conduct electricity; and h) not be used for other purposes . <p>4) The employer shall ensure that employees are trained on the procedures for lock-out tag-out.</p>
	<p>Locks</p>
356	<p>1) The employer must ensure that each employee required to lock out has ready access to sufficient personal locks to implement the required lockout procedure.</p> <p>2) Locks must be strong enough and designed to withstand inadvertent opening without the use of excessive force, unusual measures or destructive techniques and must not be a combination lock.</p> <p>3) The lock must only have a single key.</p> <p>4) Each personal lock must be marked or tagged to identify the person applying it.</p>

	5) Procedures must be implemented for shift or personnel changes, including the orderly transfer of control of locked out energy isolating devices between outgoing and incoming employees.
	Isolating piping systems
357	<p>1) To isolate piping or a pipeline containing harmful substances, under pressure, and/or high temperature, an employer shall use</p> <ul style="list-style-type: none"> a) a system of blanking or blinding; or b) a double block and bleed isolation system providing <ul style="list-style-type: none"> i. two blocking seals on either side of the isolation point; and ii. an operable bleed-off between the two seals. <p>2) An employer must ensure that piping that is blanked or blinded is clearly marked to indicate that a blank or blind is installed.</p> <p>3) An employer must ensure that, if valves or similar blocking seals with a bleed-off valve between them are used to isolate piping, the bleed-off valve is secured in the “OPEN” position and the valves or similar blocking seals in the flow lines are functional and secured in the “CLOSED” position, and is clearly marked as to what position it is in.</p> <p>4) An employer must ensure that the device used to secure the valves or seals described in subsection (3) are</p> <ul style="list-style-type: none"> a) a positive mechanical means of keeping the valves or seals in the required position; and b) strong enough and designed to withstand inadvertent opening without the use of excessive force, unusual measures or destructive techniques.
	PART 30: HAZARDOUS SUBSTANCES 
	DIVISION I – GENERAL
	Hazardous Substances Control Program
358	<p>1) If there is a likelihood that the health or safety of an employee in a workplace is or may be endangered by exposure to a hazardous substance, an employer shall implement a hazardous substance program commensurate with the associated risk for chemical, biological and physical agents exposures.</p> <p>2) Hazardous Substance Program shall include:</p> <ul style="list-style-type: none"> a) assessment of each hazardous substance in the workplace; b) necessary controls to mitigate levels of hazard; c) plan for monitoring; d) ongoing employee education and training; e) investigation procedures; f) change management for introduction of a new hazardous substance into the workplace;

	<ul style="list-style-type: none"> g) health surveillance, as appropriate; and h) periodic evaluation of program and results, and revise where required.
359	<p>In regard to subsection 358(2)(a), the employer must:</p> <ul style="list-style-type: none"> a) appoint a competent person to carry out the hazardous substance assessment; and b) for the purposes of providing for the participation of the workplace committee or coordinator, as the case may be, in the hazardous substance assessment, notify either of the proposed hazardous substance assessment and of the name of the competent person appointed to carry out that hazardous substance assessment.
360	<p>In a hazardous substance assessment referred to in subsection 358(2)(a), the following criteria shall be taken into consideration:</p> <ul style="list-style-type: none"> a) the chemical, biological and physical properties of the hazardous substance; b) the routes of exposure to the hazardous substance; c) the acute and chronic effects on health of exposure to the hazardous substance; d) the quantity of the hazardous substance; e) the manner in which the hazardous substance is produced, stored, used, handled and disposed of; f) the control methods used to eliminate or reduce exposure of employees to the hazardous substance; g) the concentration or level of the hazardous substance to which an employee is likely to be exposed; h) whether the concentration of an airborne chemical agent is likely to exceed 50 per cent of the values referred to Section 363.
361	<p>On completion of a hazardous substance assessment and after consultation with the workplace committee or coordinator, as the case may be:</p> <ul style="list-style-type: none"> a) the competent person shall set out in a written report, signed by the competent person, their: <ul style="list-style-type: none"> i. observations respecting the criteria considered; ii. recommendations respecting the manner of compliance with this Part, including recommendations respecting sampling and testing methods; b) the employer shall develop and maintain a written procedure for the control of the concentration or level of the hazardous substance in the workplace, c) An employer must, as soon as reasonably practicable, implement recommendations made pursuant to subsection (a)(ii) or, <ul style="list-style-type: none"> i. Clearly demonstrate why the recommendation cannot be implemented; and ii. implement controls that afford an equivalent level of protection.
	<p>Control of Hazardous Substances</p>
362	<ul style="list-style-type: none"> 1) Hazardous substances must be eliminated from the workplace, where practicable. 2) Where it is not practicable to eliminate, the hazardous substance shall be substituted with a less

	<p>hazardous substance, where possible.</p> <p>3) Where it is not possible to eliminate or substitute, the atmospheric contamination of the workplace by the hazardous substances must be kept as low as is reasonably practicable using engineering and administrative controls, where practicable.</p> <p>4) PPE shall be utilized only as a last line of defence.</p>
	<p>Exposure to Hazardous Substances</p>
363	<p>An employer shall ensure that</p> <ul style="list-style-type: none"> a) an employee is informed of the nature and degree of health effects of the hazardous substances to which the employee is exposed; b) exposure of an employee to hazardous substances is as minimal as is reasonably practicable, and where a threshold limit value has been established by the ACGIH, exposure shall not exceed the threshold limit value; c) an employee is not exposed to a substance that exceeds the ceiling limit, short-term exposure limit or 8-hour TWA (time weighted average) limit prescribed by ACGIH; d) Where the work period is more than 8 hours in a 24 hour day, the 8 hour exposure shall be adjusted in accordance with [as outlined in the ACGIH "Threshold Limit Values (TLVs)" Manual.] e) where a substance referred to in subsection(c) has an 8-hour TWA limit, an employee's exposure to the substance does not exceed TWA limits prescribed by ACGIH. f) when two or more hazardous substances have a similar toxicological effect on the same target organ or system, <ul style="list-style-type: none"> i. their combined effect rather than that of each individually, must be given primary consideration, ii. the additive mixture formula from the ACGIH TLV Manual shall be applied. g) If there is a likelihood that the concentration of an agent may exceed the value referred to in (c), the air must be sampled and the concentration of the agent determined by a competent person by a test that conforms to the United States National Institute for Occupational Safety and Health in the NIOSH Manual of Analytical Methods, or where NIOSH doesn't provide a methodology or where the methodology isn't applicable, another methodology and procedure validated by a competent person must be used.
364	<p>Where an employee may be exposed to a substance which is designated as a reproductive toxin or a sensitizer, an employer shall develop policy and procedures appropriate to the risk, which may include protective reassignment.</p>
365	<p>The policy and procedures required by section 364 shall include</p> <ul style="list-style-type: none"> a) informing employees about the reproductive toxin and identifying ways to minimize exposure to the toxin for an employee who has advised the employer of pregnancy, breastfeeding or intent to conceive a child; and b) identifying ways to eliminate exposure to a sensitizer for an employee who is or may become sensitized to that substance.

	Storage, Handling & Use
366	<p>1) An employer shall ensure that a hazardous substance produced, stored, used, handled or disposed of at a workplace that creates a risk to the health or safety of employees must be controlled in accordance with the Safety Data Sheets (SDS) or the manufacturer's specifications, as applicable.</p> <p>2) Where no SDS or manufacturer's specifications exist, the hazardous substance must be controlled in a manner acceptable to the CSO.</p>
367	When a hazardous substance is produced, stored, handled, used or disposed of in a workplace, any hazard resulting from that production, storage, handling, use or disposal must be confined to as small an area as reasonably practicable.
368	Every container for a hazardous substance that is used in a workplace must be so designed and constructed that it protects the employees from any health or safety hazard that is created by the hazardous substance.
369	If a container referred to in Section 368 is emptied and is not to be refilled with the hazardous substance, it must be completely cleaned of the hazardous substance that was stored in it before being reused and the label identifying the hazardous substance must be removed.
370	Where there is a hazard of ignition of a hazardous substance or combination of hazardous substances, by static electricity, the employer must adopt and implement practices that conform to the National Fire Prevention Association publication " <i>NFPA 77: Recommended Practice on Static Electricity</i> "
371	Substances which are incompatible must be stored in a manner that will prevent them from mixing in the event of a container leakage, breakage or other similar circumstance.
372	A hazardous substance shall be stored in a designated area, in a manner which ensures that it cannot readily fall, become dislodged, suffer damage, or be exposed to conditions of extreme temperature.
373	<p>A designated storage area for a hazardous substance shall be</p> <ul style="list-style-type: none"> a) designed and constructed to provide for the safe containment and protection of the contents; b) clearly identified by signs, placards or similar means; c) designed and maintained to allow the safe movement of employees, equipment and material; d) provided with the required ventilation and lighting; ; e) in a location not normally occupied by employees, including a living accommodations; f) equipped with a suitable fire suppression system if a flammable or combustible substance are stored in the designated storage area; g) clearly identified on emergency response plans or in procedures for the purposes of emergency response teams; h) designed with emergency response capabilities in place.

374	The quantity of a hazardous substance used or processed in a workplace must, as far as reasonably practicable, be kept to a minimum.
375	Bulk or reserve quantities of a hazardous substance shall be stored in a designated area separate from the work area.
376	Where a flammable or combustible substance is dispensed or transferred inside a hazardous substance storage room or area, <ul style="list-style-type: none"> a) the storage room ventilation shall conform to the National Fire Prevention Association publication “NFPA 30: Flammable and Combustible Liquids Code”, as applicable; b) exhaust air shall be discharged to the outdoors area that does not create a hazard, and makeup air provided; c) makeup air duct passing through a fire separation shall be equipped with an approved fire damper; fire damper should be fitted to close automatically on fire detection or arming of a related fire suppression system, and d) doors shall be self-closing.
	Warnings
377	If reasonably practicable, automated warning and detection systems must be provided when the seriousness of any exposure to a known hazardous substance exists, or has the potential to exist, so requires.
378	If a hazardous substance is stored in a workplace, signs must be posted in conspicuous places and access points warning of the presence of the hazardous substance.
379	Hazard information in respect of hazardous substances that are, or are likely to be, present in a workplace must be readily available for examination at the workplace.
	Assembly of Pipes
380	Every assembly of pipes, pipe fittings, valves, safety devices, pumps, compressors and other fixed equipment that is used for transferring a hazardous substance from one location to another shall be <ul style="list-style-type: none"> a) marked, by labelling, colour-coding, placarding or any other mode, to identify the hazardous substance being transferred and, if appropriate, the direction of the flow; and b) fitted with valves and other control and safety devices to ensure its safe operation, maintenance and repair c) designed to control static electricity; d) inspected by a person before it is placed in service and once a year after that; and e) maintained and repaired by a competent person.
	Employee Education
381	1) Every employer shall, in consultation with the workplace committee or coordinator, as the case may be, implement an employee education and training program with respect to hazardous

	<p>substances in the workplace.</p> <p>2) The employee education and training program shall include</p> <ul style="list-style-type: none"> a) the education and training of each employee who is likely to handle or be exposed to a hazardous substance, with respect to <ul style="list-style-type: none"> i. the product identifier of the hazardous substance, ii. all hazard information disclosed by the supplier or by the employer on a safety data sheet or label, iii. all hazard information of which the employer is aware or ought to be aware, iv. the observations referred to in subsection 361(a)(i), v. the information disclosed on a safety data sheet referred to in section 393 and the purpose and significance of that information, and vi. in respect of hazardous products in the workplace, the information required to be disclosed on a safety data sheet and on a label under Division III and the purpose and significance of that information; b) the education and training of each employee who installs, operates, maintains or repairs an assembly of pipes or any other equipment referred to in section 380, with respect to <ul style="list-style-type: none"> i. valves and other control and safety devices connected to the relevant assembly of pipes the employee is responsible for, ii. the procedures to follow for the safe installation, maintenance, repair and use of the assembly of pipes, and iii. the significance of the labelling, colour-coding, placarding or other modes of identification that are used; c) the education and training of each employee who is referred to in paragraph (a) or (b), with respect to <ul style="list-style-type: none"> i. the procedures to follow to implement sections 367 and 370 ii. the procedures to follow for the safe storage, handling, use and disposal of hazardous substances, including procedures to be followed in an emergency involving a hazardous substance, and iii. the procedures to follow if an employee is exposed to fugitive emissions; and d) the education and training of each employee on the procedures to follow to access electronic or paper versions of reports, records of education and training given and safety data sheets <p>3) Every employer shall, in consultation with the workplace committee or coordinator, as the case may be, review and, if necessary, revise the employee education and training program</p> <ul style="list-style-type: none"> a) at least once a year; b) whenever there is a change in conditions in respect of the presence of hazardous substances in the workplace; and c) whenever new hazard information in respect of a hazardous substance in the workplace becomes available to the employer.
382	<p>The employer shall keep a record of the education and training given to every employee and</p> <ul style="list-style-type: none"> a) make it readily available to the employee in any form, as determined in consultation with the

	workplace committee or the coordinator, as the case may be; and b) Retain in accordance with schedule in section 18.
	Health Surveillance
383	Where a report referred to in section 361(a) recommends a medical examination for the employees likely to be exposed to a hazardous substance, the employer shall consult a physician who has specialized knowledge in respect of the hazardous substance in the workplace.
384	The employer, having consulted a physician with specialized knowledge of the workplace and who has confirmed the necessity for a medical examination, shall not permit an employee to work with the hazardous substance in the workplace unless a physician acceptable to the employee has examined and declared the employee fit, or fit with specified restrictions, to work with the hazardous substance.
385	Where the physician examining an employee declares the employee fit with specified restrictions to work with the hazardous substance, the employer shall not permit the employee to handle the hazardous substance in the workplace except in accordance with the specified restrictions
386	Where an employer consults a physician the employer shall keep a copy of the physician's decision with the report.
387	The cost of a medical examination shall be borne by the employer.
388	In addition to the medical examination requirements listed above, an employer shall assess the need for and extent of health surveillance of employees.
389	If recommended as a result of the assessment under section 388 or as required by the CSO, an employer shall establish and maintain a program for the surveillance of the health of employees, which shall conform to following guidelines a) the International Code of Ethics for Occupational Health Professionals; and b) the International Labour Organization's Technical and Ethical Guidelines for Health Surveillance.
390	The employer shall ensure that a health surveillance program in a workplace is communicated to the employees of that workplace.
391	An employer shall keep records of a health surveillance program in accordance with the Section 18, and these records shall be made available to an employee who requests information pertaining to their health surveillance records.
	Radiation-Emitting Devices
392	1) When a device that is capable of producing and emitting energy in the form of electromagnetic waves or acoustical waves is used in a workplace, the employer must conform to the applicable safety code published by Health Canada.

	2) Notwithstanding the exposure limits laid out in Section 363, exposure limits to radiation and radon shall not exceed those established by Health Canada.
	DIVISION II – HAZARDOUS SUBSTANCES OTHER THAN HAZARDOUS PRODUCTS
393	Every container of a hazardous substance, other than a hazardous product, that is stored, handled, used or disposed of in the workplace shall be labelled in a manner that discloses clearly <ul style="list-style-type: none"> a) the generic name of the substance; and b) the hazard information in respect of the substance.
394	If a safety data sheet in respect of a hazardous substance, other than a hazardous product, that is stored, handled or used in the workplace may be obtained from the supplier of the hazardous substance, the employer shall <ul style="list-style-type: none"> a) obtain a copy of the safety data sheet; and b) keep the copy of the safety data sheet readily available for examination by employees in any form, the workplace committee or the coordinator, as the case may be.
	DIVISION III – HAZARDOUS PRODUCTS
	Application
395	1) This Division does not apply in respect of any <ul style="list-style-type: none"> a) manufactured article as defined in section 2 of the <i>Hazardous Products Act</i>; or b) wood or a product made of wood. <p>2) This Division, other than section 408 does not apply in respect of hazardous waste.</p>
	Safety Data Sheets and Labels in Respect of Certain Hazardous Products
396	1) Subject to subsection (2) and section 407 every employer shall implement the provisions of sections 393 and 394 in respect of a hazardous product and may, in so doing, replace the generic name of the product with the brand name, chemical name, common name or trade name, if the hazardous product <ul style="list-style-type: none"> a) is present in the workplace; b) was received from a supplier; and c) is one of the following: <ul style="list-style-type: none"> i. a hazardous product, other than wood or a product made of wood, that is listed in Schedule 1 to the <i>Hazardous Products Act</i>, ii. a nuclear substance, as defined in section 2 of the <i>Nuclear Safety and Control Act</i>, that is radioactive. <p>(2) An employer may store a hazardous product received from a supplier without having a supplier label on it, without having obtained a safety data sheet for it and without having conducted an employee education and training program with respect to the matters referred to in subparagraphs 381(2)(a)(ii) and (c)(ii)</p>

	<ul style="list-style-type: none"> a) while the employer is actively seeking a supplier label and a supplier safety data sheet for the hazardous product; and b) if labelling affixed to the container of the hazardous product containing information on the hazardous product is not removed, defaced, modified or altered.
	Supplier Safety Data Sheets
397	<ul style="list-style-type: none"> 1) If a hazardous product, other than a hazardous product referred to in paragraph 396(1)(c), is received in the workplace by an employer, the employer shall, without delay, obtain a supplier safety data sheet in respect of the hazardous product from the supplier, unless the employer is already in possession of a supplier safety data sheet that <ul style="list-style-type: none"> a) is for a hazardous product that both has the same product identifier and is from the same supplier; b) discloses information that is current at the time that the hazardous product is received; and c) was prepared and dated less than three years before the day on which the hazardous product is received. 2) If the supplier safety data sheet in respect of a hazardous product in a workplace is three years old or more, the employer shall, if possible, obtain from the supplier a current supplier safety data sheet. 3) If it is not practicable for an employer to obtain a current supplier safety data sheet, the employer shall update the hazard information on the most recent supplier safety data sheet that the employer has received, on the basis of the ingredients disclosed on that supplier safety data sheet and on the basis of any significant new data of which the employer is aware. 4) The employer is exempt from the requirements of subsection (1) if a laboratory sample of a hazardous product is received in the workplace from a supplier who is exempted by the <u>Hazardous Products Regulations</u> from the requirement to provide a safety data sheet for that product.
	Workplace Safety Data Sheets
398	<ul style="list-style-type: none"> 1) Subject to section 406, if an employer produces in the workplace a hazardous product, other than a fugitive emission or an intermediate product undergoing reaction within a reaction or process vessel, or imports into Canada a hazardous product and brings it into the workplace, the employer shall prepare a workplace safety data sheet in respect of that hazardous product. 2) Subject to section 407, if an employer receives a supplier safety data sheet, the employer may prepare a workplace safety data sheet to be used in the workplace in place of the supplier safety data sheet if <ul style="list-style-type: none"> a) the workplace safety data sheet discloses at least the information disclosed on the supplier safety data sheet; b) the information disclosed on the workplace safety data sheet does not disclaim or contradict the information disclosed on the supplier safety data sheet; c) the supplier safety data sheet is readily available for examination by employees in any form, as determined in consultation with the policy committee or, if there is no policy committee, the workplace committee or coordinator, as the case may be; and

	<p>d) the workplace safety data sheet discloses that the supplier safety data sheet is available in the workplace.</p> <p>3) An employer shall review the accuracy of the information disclosed on a workplace safety data sheet referred to in subsection (1) or (2) and update it as soon as practicable after new hazard information or significant new data becomes available to the employer.</p> <p>4) If the information required to be disclosed on the workplace safety data sheet is not available or not applicable to the hazardous product, the employer shall, in place of the information, insert the words “not available” or “not applicable”, as the case may be, in the English version and the words “<i>non disponible</i>” or “<i>sans objet</i>”, as the case may be, in the French version, of the workplace safety data sheet.</p>
	<p>Availability of Safety Data Sheets</p>
399	<p>1) Every employer shall keep readily available for examination by employees and by the workplace committee or coordinator, as the case may be, in any workplace in which an employee is likely to handle or be exposed to a hazardous product a copy, of</p> <ul style="list-style-type: none"> a) in the case of an employer referred to in subsection 398(1) or (2), the workplace safety data sheet; and b) in any other case, the supplier safety data sheet. <p>2) The workplace safety data sheet and supplier safety data sheet shall be made available in any form, as determined in consultation with the workplace committee or coordinator, as the case may be.</p>
	<p>Labels</p>
400	<p>1) Subject to sections 402 to 404, each hazardous product, other than a hazardous product referred to in paragraph 396(1)(c), in a workplace and each container in which the hazardous product is contained in a workplace shall, if the hazardous product or the container is received from a supplier,</p> <ul style="list-style-type: none"> a) in the case where the hazardous product is in a bulk shipment, be accompanied by a supplier label; b) in the case where the employer has undertaken in writing to apply a label to the inner container of the hazardous product, have applied to it a supplier label as soon as possible after the hazardous product is received from the supplier; and c) in any other case, have applied to it a supplier label. <p>2) Subject to sections 402 to 404 and 407, if a hazardous product, other than a hazardous product referred to in paragraph 396(1)(c), is received from a supplier and an employer places the hazardous product in the workplace in a container other than the container in which it was received from the supplier, the employer shall apply to the container a supplier label or workplace label that discloses the following information:</p> <ul style="list-style-type: none"> a) the product identifier; b) the hazard information in respect of the hazardous product; and c) a statement indicating that a safety data sheet for the hazardous product is available in the

	<p>workplace.</p> <p>3) Subject to sections 406 and 407 no person shall remove, deface, modify or alter the supplier label applied to</p> <ul style="list-style-type: none"> a) a hazardous product that is in the workplace; or b) the container of a hazardous product that is in the workplace.
401	<p>1) Subject to sections 402 to 404, if an employer produces in the workplace a hazardous product, other than a fugitive emission, or imports into Canada a hazardous product and brings it into the workplace, and the hazardous product is not in a container, the employer shall disclose the following information on a workplace label applied to the hazardous product or on a sign posted in a conspicuous place in the workplace:</p> <ul style="list-style-type: none"> a) the product identifier; b) the hazard information; and c) a statement indicating that the associated safety data sheet is available in the workplace. <p>2) Subject to sections 402 and 404 where an employer produces a hazardous product in the workplace, other than a fugitive emission, or imports into Canada and brings into the workplace a hazardous product, and places the hazardous product in a container, the employer shall apply to the container a workplace label that discloses the information referred to in paragraphs (1)(a) to (c).</p> <p>3) Subsection (2) does not apply in respect of a hazardous product that is</p> <ul style="list-style-type: none"> a) intended for export, if the information referred to in paragraphs (1)(a) to (c) is disclosed on a sign posted in a conspicuous place in the workplace; or b) packaged in a container and offered for sale in Canada, if the container is or is in the process of being appropriately labelled for that purpose.
	<p>Portable Containers</p>
402	<p>If an employer stores a hazardous product in the workplace in a container that has applied to it a supplier label or a workplace label, a portable container filled from that container is exempted from the labelling requirements under section 399 or 400 if</p> <ul style="list-style-type: none"> a) the hazardous product is required for immediate use; or b) the following conditions apply in respect of the hazardous product: <ul style="list-style-type: none"> i. it is under the control of and used exclusively by the employee who filled the portable container, ii. it is used only during the work shift in which the portable container was filled, and iii. it is clearly identified by a workplace label applied to the portable container that discloses the product identifier.
	<p>Special Cases</p>
403	<p>An employer shall, in a conspicuous place near a hazardous product, post a sign in respect of the hazardous product that discloses the product identifier if the hazardous product is</p> <ul style="list-style-type: none"> a) in a process, reaction or storage vessel;

	<ul style="list-style-type: none"> b) in a continuous-run container; c) in a bulk shipment that is not placed in a container at the workplace; or d) not in a container and stored in bulk.
	Laboratories
404	<ol style="list-style-type: none"> 1) If a laboratory sample of a hazardous product is the subject of a labelling exemption under subsection 5(5) of the <i>Hazardous Products Regulations</i>, a label that is provided by the supplier and is affixed to, printed on or attached to the container of the sample received at the workplace and that discloses the following information in place of the information required under paragraph 3(1)(d) of those Regulations is considered to comply with the requirements set out in section 399 with respect to a supplier label: <ul style="list-style-type: none"> a) if known by the supplier, the chemical name or generic chemical name of any material that is in the hazardous product and that is classified under the <i>Hazardous Products Act</i> and the <i>Hazardous Products Regulations</i> as a biohazardous infectious material; and b) the statement “Hazardous Laboratory Sample. For hazard information or in an emergency, call/Échantillon pour laboratoire de produit dangereux. Pour obtenir des renseignements sur les dangers ou en cas d’urgence, composez”, followed by an emergency telephone number for the purpose of obtaining the information that must be provided on the safety data sheet of a hazardous product. 2) If a laboratory sample of a hazardous product is the subject of a labelling exemption under subsection 5(6) of the <i>Hazardous Products Regulations</i>, a label that is provided by the supplier and is affixed to, printed on or attached to the container of the sample received at the workplace and that discloses the following information in place of the information required under paragraph 3(1)(c) or (d) of those Regulations is considered to comply with the requirements set out in section 399 with respect to a supplier label: <ul style="list-style-type: none"> a) if known by the supplier, the chemical name or generic chemical name of any material or substance that is in the hazardous product and that is referred to in subsection 3(2) of Schedule 1 to the <i>Hazardous Products Regulations</i>; and b) the statement “Hazardous Laboratory Sample. For hazard information or in an emergency, call/Échantillon pour laboratoire de produit dangereux. Pour obtenir des renseignements sur les dangers ou en cas d’urgence, composez”, followed by an emergency telephone number for the purpose of obtaining the information that must be provided on the safety data sheet of a hazardous product. 3) If a hazardous product is in a container other than the container in which it was received from a supplier or is produced in the workplace, the employer is exempt from the requirements set out in section 401 and subparagraph 402(b)(iii) if <ul style="list-style-type: none"> a) the employer has complied with subsection (4); b) employee education and training is provided as required by these Regulations; and c) the hazardous product <ul style="list-style-type: none"> i. is a laboratory sample, ii. is intended by the employer to be used solely for analysis, testing or evaluation in a

	<p>laboratory, and</p> <p>iii. is clearly identified through any mode of identification visible to employees at the workplace.</p> <p>4) For the purposes of paragraph (3)(a), the employer shall ensure that the mode of identification used and the employee education and training provided enable the employees to readily identify and obtain either the information required on a safety data sheet or the information set out in subsections (1) and (2) with respect to the hazardous product or laboratory sample.</p> <p>5) The employer is exempt from the requirements of section 400 if a laboratory sample of a hazardous product is received in a workplace from a supplier who is exempted by the <u>Hazardous Products Regulations</u> from the requirement to provide a label for that product.</p>
	Signs
405	The information disclosed on a sign shall be of such a size that it is clearly legible to employees.
	Replacing Labels
406	<p>1) If, in a workplace, a label applied to a hazardous product or the container of a hazardous product becomes illegible or is removed from the hazardous product or the container, the employer shall replace the label with a workplace label that discloses the following information:</p> <ul style="list-style-type: none"> a) the product identifier; b) the hazard information in respect of the hazardous product; and c) a statement indicating that the associated safety data sheet for the hazardous product is available in the workplace. <p>2) An employer shall review the accuracy of the information on a workplace label and update it as soon as practicable after new hazard information or significant new data becomes available to the employer.</p>
	Exemptions from Disclosure
407	<p>1) Subject to subsection (2), if an employer has filed a claim for exemption from the requirement to disclose information on a safety data sheet or on a label under subsection 11(2) of the <u>Hazardous Materials Information Review Act</u>, the employer shall disclose, in place of the information that the employer is exempt from disclosing,</p> <ul style="list-style-type: none"> a) if there is no final disposition of the proceedings in relation to the claim, the date on which the claim for exemption was filed and the registry number assigned to the claim under section 10 of the <u>Hazardous Materials Information Review Regulations</u>; and b) if the final disposition of the proceedings in relation to the claim is that the claim is valid, a statement that an exemption has been granted and the date on which the exemption was granted. <p>2) If a claim for exemption is in respect of a product identifier, the employer shall, on the safety data</p>

	sheet or label of the hazardous product, disclose, in place of that product identifier, a code name or code number specified by the employer as the product identifier for that hazardous product.
	Hazardous Waste
408	<p>1) If a hazardous product in the workplace is hazardous waste, the employer shall disclose the generic name and hazard information in respect of the hazardous product by</p> <ol style="list-style-type: none"> a) applying a label to the hazardous waste or its container; or b) posting a sign in a conspicuous place near the hazardous waste or its container. <p>2) The employer shall provide education and training to employees regarding the safe storage and handling of hazardous waste that is found in the work place.</p>
	Information Required in a Medical Emergency
409	For the purposes providing information pursuant to subsection 205.023(1) / 210.023(1) of the Act, a medical professional includes a medic.
	PART 31: EXPLOSIVES
	General
410	<p>1) An employer must ensure:</p> <ol style="list-style-type: none"> a) that each person involved in any explosive activity under this Section is competent; b) all persons who are authorized to have access to explosives are designated by the employer; and c) only personnel that are directly involved in the explosive activity are permitted in the designated area. <p>2) All explosive activity requires a permit to work as per Part 12.</p> <p>3) Safe work procedures must be developed and must include the following:</p> <ol style="list-style-type: none"> a) a detailed description of how the planned explosive activity will be safely performed; b) provisions for the charging and extraction; c) identification of when non-sparking tools are required; d) consideration of possible effects from weather conditions; e) provisions for oversight of explosives by a competent person; f) provisions for the safe transportation, storage and handling of detonators; g) provisions for the safe transportation, storage, handling, preparation and loading of explosives; h) provisions for the protection of people and property; i) provisions for misfires; and j) provisions for storage of loaded explosive devices. k) Designated area for explosive activity, including where explosive devices are assembled and charged;

	<ul style="list-style-type: none"> l) Provisions for disposal of waste explosive materials; and m) Provisions for dealing with stray electrical energy and radiofrequency before the charging and extraction of the explosive device.
	Explosives and Detonators
411	<ul style="list-style-type: none"> 1) A detonator must not be stored with an explosive that is not a detonator. 2) A detonator must not be stored with a detonator of a different type. 3) Not more than 75 kg of explosives must be stored on a drilling unit or offshore production facility, unless otherwise authorized by the Chief Safety Officer. 4) Explosives must be stored in a locked container that is accessible only to a competent person.
412	<ul style="list-style-type: none"> 1) The competent person must make an inventory record of all explosives and detonators used for or stored by the competent person or removed for use. 2) The record must be kept readily accessible at the workplace and must contain <ul style="list-style-type: none"> a) the type and amount of explosives and detonators used, stored or removed for use; b) the date of use, storage or removal; c) particulars of the explosive activity; and d) the name of the qualified person who made the record. 3) An employer must keep the copy of all records related to explosives, detonators and blasting in accordance with Section 18.
	PART 32: COMPRESSED GAS
413	An employer shall ensure that compressed gas in a container is used, stored, transported, segregated and handled in a manner in which the hazard is eliminated, where possible, or reduced to a minimum.
414	<ul style="list-style-type: none"> 1) Compressed gas cylinders and associated equipment (regulator, automatic reducing valve, gauge, hose line or other equipment provided for use with a compressed gas cylinder) must be compatible for use, as indicated in the manufacturers' specifications. 2) An employer shall ensure that a regulator, automatic reducing valve, gauge, hose line or other equipment provided for use with a compressed gas cylinder and a particular gas or group of gases, is not used on a compressed gas cylinder containing a different gas unless this use is approved by the supplier of the compressed gas cylinder, regulator, automatic reducing valve, gauge, hose line or other equipment 3) An employer shall ensure that a compressed gas cylinder has

	<ul style="list-style-type: none"> a) connections to piping, regulators and other components that are kept tight to prevent leakage; and b) valves that are kept closed at all times, whether the cylinder is charged or empty, except where <ul style="list-style-type: none"> i. gas is flowing from the cylinder, ii. the gas in the cylinder is maintaining pressure in a supply line, or iii. the cylinder is on stand-by during and between operations using gas <p>4) An employer shall ensure that hose lines for conveying flammable gas or oxygen from supply piping or compressed gas cylinders to torches have threads that conform to Compressed Gas Association standard ANSI/CGA V-1, “<i>American National Standard/Compressed Gas Association Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections</i>”.</p>
	<p>Portable compressed gas cylinders</p>
415	<p>An employer shall ensure that during transportation a portable compressed gas cylinder is</p> <ul style="list-style-type: none"> a) securely fastened and in an upright position, unless designed for transport in another orientation; b) has a protective cap attached or located on the cylinder or the cylinder is positioned in a manner that will provide an equivalent level of safety; and c) is transported in a manner that will prevent damage to the cylinder and its components. d) transported in a manner that is compliant with the requirements of <i>Transportation of Dangerous Goods</i>.
416	<ul style="list-style-type: none"> 1) No person shall <ul style="list-style-type: none"> a) roll a portable compressed gas cylinder on its side; b) subject a portable compressed gas cylinder to rough handling; or c) move a portable compressed gas cylinder with a lifting magnet or sling. 2) Where appropriate lifting mechanisms have not been provided on a portable compressed gas cylinder, an employer shall ensure that a suitable cradle, platform or other device for holding the cylinder are used for lifting it.
417	<ul style="list-style-type: none"> 1) An employer shall ensure that a portable compressed gas cylinder is stored <ul style="list-style-type: none"> a) in a well-ventilated storage area where the cylinder is not exposed to temperature extremes in accordance with the gas and cylinder suppliers’ specifications; b) with cylinders grouped by types of gas and the groups arranged to take into account the gases contained; c) with full and empty cylinders separated; d) at a safe distance from all operations that produce flames, sparks or molten metal or result in excessive heating of the cylinder; e) securely with appropriate securing devices that can withstand a fire ; and f) with protective devices in place. 2) An employer shall ensure that a portable compressed gas cylinder is <ul style="list-style-type: none"> a) not exposed to corrosive materials or corrosion-aiding substances;

	<ul style="list-style-type: none"> b) protected from excessive heat or fire; and c) protected from falling and from impact. <p>3) An employer shall prominently post in a storage area for portable compressed gas cylinders the names of the gases stored.</p>
	<p>PART 33: BATTERIES</p>
418	<p>1) Where the electric charging of batteries is routinely performed, and there are reasonable grounds to believe that any hazardous substances are likely to be generated during the charging process, an employer shall obtain a risk assessment in writing from a competent person.</p> <p>2) Where the risk assessment referred to in subsection (1) determines that the charging of batteries is likely to cause an explosive mixture of hydrogen or the release of another hazardous substance, an employer shall ensure that appropriate controls are put in place to mitigate against the hazard.</p>
	<p>PART 34: TOOLS AND MACHINERY</p>
	<p>General</p>
419	<p>1) Tools, machinery, equipment and supplies must be</p> <ul style="list-style-type: none"> a) made of good quality material adequate for the work for which they are intended to be used; b) used only for their intended purpose; c) equipped with a device to ensure a secure hand grip where necessary <p>2) Tools, machinery and equipment, including guards, must be operated, maintained and repaired by a competent person.</p>
	<p>Design, Construction, Operation and Use of Tools</p>
420	<p>The exterior surface of any tool that is used in a hazardous area must be made of non-sparking material.</p>
421	<p>Tools and machinery used in the workplace must conform and be used in accordance with the requirements laid out in the applicable standard relevant to the tool or machinery:</p> <ul style="list-style-type: none"> a) CSA Standard C22.2 No. 60745-2, ULC Standard 60745-2 or International Electrotechnical Commission Standard 60745-2 for portable electric tools; b) ANSI A10.3, <i>Safety Requirements for Powder-Actuated Systems for all explosive actuated fastening tools</i>; c) CSA Standard Z432, <i>Safeguarding of Machinery</i>; d) CSA Standard Z142, <i>Code for the Power Press Operation: Health, Safety and Safeguarding Requirements for punch presses</i>; e) ANSI Standard B11.4 <i>American National Standard for Machine Tools -- Shears -- Safety Requirements for Construction, Care, and Use</i>;

	f) ANSI Standard B11.5 <i>American National Standard for Machine Tools -- Ironworkers -- Safety Requirements for Construction, Care, and Use.</i>
422	All portable electric tools must be grounded, except if they <ol style="list-style-type: none"> a) are powered by a self-contained battery; b) have a protective system of double insulation; or c) are used in a location where reliable grounding cannot be obtained if the tools are supplied from a double-insulated portable ground fault circuit interrupter of the class A type that conforms to CSA Standard C22.2 No. 144, <i>Ground Fault Circuit Interrupters.</i>
423	All portable electric tools used in a hazardous area must be rated as appropriate for use or designed for use in such areas.
424	If a hose is connected to an air-powered tool a safety restraining device must be attached to all hose connections.
	Instructions and Training
425	<ol style="list-style-type: none"> 1) If an employee is required to use a machine or tool, they must be instructed and trained by a competent person in all aspects of the machine or tool for which they are responsible. 2) Every employer must maintain a manual of operating instructions for each type of machinery and portable powered tools used by the employees and keep it readily available for examination by an employee who is required to use the tool or machine to which the manual applies.
	Machine and Equipment Guarding
426	<ol style="list-style-type: none"> 1) Every machine and equipment that has exposed moving, rotating, electrically charged or hot parts or that processes, transports or handles material that constitutes a hazard to an employee must be equipped with a guard that <ol style="list-style-type: none"> a) prevents the employee or any part of the employee from coming into contact with the parts or material; b) prevents access by the employee to the area of exposure to the hazard during the operation of the machine; and c) if reasonably practicable, renders the machine inoperative if any part of the employee is in or near a part of the machine that is likely to cause injury. 2) To the extent that is reasonably practicable, a guard shall not be readily removable without the use of tools. 3) A guard must be so constructed, installed and maintained that it meets the requirements of subsection (1).

	<p>4) Machinery must be fitted with adequate safeguards that safely contain material ejected by the work process that could be hazardous to an employee.</p> <p>5) Where there is a particular danger from:</p> <p>a) a wire rope that is in tension, a guard shall be installed and appropriate measures taken to protect any employee in the vicinity of the hazard</p> <p>b) other equipment that is in tension, appropriate measures shall be taken to protect any employee in the vicinity of the hazard</p> <p>6) Where opening an access door or moving a guard exposes the moving parts of a machine or tool, the access door must be fitted with interlocks, where reasonably practicable, that:</p> <p>a) Prevents the access door from opening while the moving parts are in motion; or</p> <p>b) Disconnect the power from the driving mechanism, causing the moving parts to stop immediately if the door is open.</p> <p>7) An employer shall ensure that adequate space is provided around a machine to ensure the safety of a person while the machine is being operated, cleaned, adjusted, repaired or otherwise maintained.</p>
427	Notwithstanding section 426, where it is not reasonably practicable to install a guard, safeguards must be put in place to protect the employee from the hazard.
	Use, Operation, Repair and Maintenance of Machine Guards
428	<p>1) If a guard is installed on a machine, a person must not use or operate the machine unless the guard is in its proper position, except to permit the removal of an injured person.</p> <p>2) Subject to subsection (3), where it is necessary to remove a guard in order to perform testing, cleaning, repair or maintenance work on the machine, it must be locked out and de-energized in accordance with a written lock out procedure. Upon completion, the guard shall be replaced and verified functioning properly before leaving the machine.</p> <p>3) If it is not reasonably practicable to render the machine inoperative, the testing, cleaning, repair or maintenance work must be performed by a competent person and in accordance with established procedures and methods.</p>
	Abrasive Wheels and Grinders
429	<p>1) Abrasive wheels must be inspected by a competent person for defects, cracks or other problems before their installation.</p> <p>2) Abrasive wheels must be used only on machines that are equipped with machine guards, mounted between flanges and operated and maintained in accordance with the manufacturer's specifications.</p>

	<p>3) A bench grinder must be equipped with a work rest or other device that prevents the work piece from jamming between the abrasive wheel and the wheel guard and that does not make contact with the abrasive wheel at any time.</p> <p>4) A grinder may only be used with an abrasive wheel if the grinder is rated to provide a number of revolutions per minute that is no more than the rating of the abrasive wheel.</p>
	<p>Controls</p>
430	<p>Machinery shall have:</p> <ul style="list-style-type: none"> a) starting and stopping controls located within easy reach of the operator; b) controls and switches clearly identified to indicate the functions that they serve; c) controls positioned, designed or shielded to prevent inadvertent activation.
	<p>Abrasive Blasting and High Pressure Washing</p>
431	<ul style="list-style-type: none"> 1) An employer shall ensure that a risk assessment is completed and identified control measures put in place before any abrasive blasting, high pressure washing process or related cleanup is started which may cause release of a harmful level of an air contaminant. 2) Written safe work procedures must be developed and followed for any abrasive blasting, high pressure washing or a similar operation. 3) Where abrasive blasting, high pressure washing or similar operation is conducted outside a structure, the process shall be restricted to a work zone which is identified by warning signs or similar means as a contaminated area. 4) Only employees who are necessary to perform the work shall be permitted inside an enclosure or a restricted work zone where abrasive blasting, high pressure washing or a similar operation is conducted. 5) The operating controls for an abrasive blasting or a high pressure washing machine shall be <ul style="list-style-type: none"> a) located near the nozzle in a position where the operator's hands are when using the device; b) a continuous pressure type that immediately stops the flow of material when released; and c) protected from inadvertent activation. 6) Where hand operated controls are impracticable, paragraph (5)(a) does not apply and an operator shall use a foot operated control or equivalent safety device. 7) High pressure hoses, pipes, and fittings shall be equipped with a safety restraining device to prevent hazardous sway and movement. 8) Except where the process is isolated from the operator in a separate cabinet, suitable respiratory protective equipment shall be provided and worn whenever abrasive blasting, or a similar operation is conducted.

	PART 35: HOT WORK
432	All hot work activities shall require a Work Permit in accordance with Part 12.
433	The risk assessment undertaken as part of the Permit to Work process must consider, at minimum: <ul style="list-style-type: none"> a) Location of the activity, in particular, relative to any identified hazardous areas b) Presence of any flammable, explosive or combustible material. c) Presence of any material that would produce toxic or flammable vapours d) The tools and equipment to be used in the work e) Necessary Personal protective equipment; f) Information and training necessary for all persons involved in the hot work activity g) Environmental and operating conditions or limitations.
434	Written safe work procedures must be developed and implemented for all hot work activities.
435	Welding, cutting and allied process activities must conform to CSA W117 <i>Safety in Welding, Cutting and Allied Processes</i> .
436	An employer shall ensure that an employee does not perform hot work unless all of the following conditions are satisfied: <ul style="list-style-type: none"> a) In the case of an explosive or flammable gas vapour, the atmospheric concentration is less than 5% of the lower explosive limit, as determined by an appropriate gas detection device, b) Oxygen concentrations are less than 22.5% c) The atmosphere is continuously monitored for flammable substances and toxic gases if there is a risk of it being present in the area d) all potential sources of flammable and explosive gases are identified and blinded and locked out, e) a competent person patrols and maintains a fire watch until all fire hazards have passed, f) fire fighting equipment appropriate to the potential loss exposure is provided; g) A coating on metal which could emit harmful contaminants, including lead, chromium, organic materials, or toxic combustion products shall be removed from the base metal, whenever practicable, before welding or cutting.
437	Prior to undertaking any hot work activity, the area and adjacent areas that may be affected must be cleaned, inspected and verified to ensure there is no flammable, explosive or combustible materials, dust, gas, vapour or residue, or other material that could produce a toxic or flammable vapour when heated.
438	Where hot work uses gas: <ul style="list-style-type: none"> a) the regulators and associated flexible connecting hoses must be tested immediately after it is connected to a gas cylinder to ensure that there is no leak of a gas supply. b) No person shall perform a test required in (a) with a substance that is oil, fat or grease based. c) A person must be stationed appropriately in order to action an emergency shut-off, if required. d) Where a leak of the gas supply develops during the performance of hot work using gas <ul style="list-style-type: none"> i. the gas supply shall be immediately cut off; and

	<ul style="list-style-type: none"> ii. The work shall not be resumed until the leak is repaired and tested to verify the repair was successful.
439	<p>Where hot work uses gas,</p> <ul style="list-style-type: none"> a) The employee shall: <ul style="list-style-type: none"> i. ensure that parts are free from defects, leaks or oil and grease; and, ii. unless the risk assessment required under CSA W117 (required in Section 435) determines otherwise, be provided with flashback arrestors at the regulators and the torch, that: <ul style="list-style-type: none"> 1. prevents the reverse flow of fuel, gas, oxygen or air from the torch to the supply lines, and 2. stops a flame from burning back from a torch into the supply lines; b) The hose lines or pipelines for conveying the gases to the burner and couplings must be legibly marked or identified to ensure the hoses are not interchanged; c) The torch must be ignited by a device that is designed for that purpose; d) only standard fittings, designed and manufactured for the specific compressed gas service shall be used e) A regulator or an automatic reducing valve of welding equipment shall only be used for the gas for which it was designed; and f) any charged gas cylinders shall be protected from a source of heat in excess of 54° Celsius.
440	Cylinders, piping and fittings of compressed and liquefied-gas systems shall be located or protected in a manner that prevents physical damage to them.
441	Hot metal parts and electrode stubs shall be disposed of appropriately to dissipate heat and minimize potential for fire and ignition.
	PART 36: CONFINED SPACES
442	When assessing whether a space is or may become hazardous to a person entering it, a person must not take into account the protection afforded to a person through the use of personal protective equipment or additional ventilation.
	Confined Space Management Program
443	Employer must develop, establish, implement and maintain, as part of the broader OHS program, a confined space management program in accordance with this Part.
	Identification of Confined Spaces
444	The workplace shall be evaluated by a competent person and identify and record any confined spaces that exist.
445	To prevent inadvertent access, all confined spaces must be visibly identified to:

	<ul style="list-style-type: none"> a) identifies it as a confined space; b) indicates access is restricted to authorized personnel only; and, c) warning that a danger exists.
446	Employer must re-evaluate the workplace for confined space every three years and as a result of changes in the workplace that may have created new confined spaces, or eliminated ones, and record any changes from the last evaluation.
	Hazard Assessment
447	<p>Prior to a person entering a confined space, the employer shall appoint a competent person to:</p> <ul style="list-style-type: none"> a) carry out an assessment of: <ul style="list-style-type: none"> i. the hazards that may exist due to the design, construction, location, use or contents of the confined space; ii. the hazards that may develop while work is done inside the confined space; b) specify the tests that are necessary to determine whether the person would be likely to be exposed to any of the hazards identified pursuant to subsection (a).
448	The competent person referred to in section 447 shall, in a signed and dated report to the employer, record the findings of the assessment carried out pursuant to subsection 447(a).
449	<p>Upon request, the employer shall make a copy of any report made pursuant to section 447 available to:</p> <ul style="list-style-type: none"> a) the work place committee or the health and safety representative; and, b) any employee who is required to enter the confined space.
450	The employer shall ensure that the assessment is reviewed as often as necessary to ensure that the assessment referred to in subsection 447(a) remains current.
	Procedures
451	<ol style="list-style-type: none"> 1) Where a confined space exists in the workplace, the employer shall, in consultation with the health and safety committee or health and safety representative, establish written work procedures that are to be followed by a person entering, exiting or occupying a confined space. 2) Written work procedures must specify: <ul style="list-style-type: none"> a) The required controls specific to the known hazards or the task to be performed, taking into consideration the equipment bring used; b) The standard protective equipment that is to be used by every person who is entering a confined space; c) Retrieval equipment to be worn by every person entering a confined space, including the type of full body harness to be worn, where practicable; d) Additional rescue equipment to extract an unconscious person; e) The processes for preventing entanglement of life-lines and other equipment where one or more

	<p>employees are entering the confined space;</p> <p>f) Equipment to be used for atmospheric testing, including calibration requirements; and,</p> <p>g) All training requirements for entrants, attendants and rescuers.</p>
452	Notwithstanding Section 451, the use of a lifeline and/or full body harness is not required where an obstruction or other condition makes its use unsafe but, in that case, an employer shall implement procedures to ensure the safety, and safe removal, of the employee.
453	Employer must re-evaluate the procedure every three years and upon any structural or equipment modifications, or change in purpose, and record any changes from the last evaluation.
444	<p>In consultation with the workplace committee or health and safety representative, the employer shall develop written emergency procedures to be followed in the event of an emergency in or near the confined space, on all of the following:</p> <p>a) a plan for responding to emergencies and preventing or mitigating any illness or injury as a result of potential hazards that might be encountered;</p> <p>b) the methods for communication , including:</p> <p style="padding-left: 20px;">i. between entrants and those outside the confined (attendants and rescuers);</p> <p style="padding-left: 20px;">ii. signaling evacuation;</p> <p>c) a plan to rescue an employee following an accident or emergency in the confined space;</p> <p>d) identification of the necessary resources to implement a plan under subsection (a) & (b) effectively, including a determination of whether more than one person is required to be present outside a confined space during its occupancy by any person;</p> <p>e) provision to ensure immediate evacuation of the confined space when an alarm is activated or there is any significant, unexpected and potentially hazardous change in the concentration, level or percentage referred to in section 449;</p> <p>f) means by which a written emergency procedure would be initiated;</p> <p>g) communicating with other employees in the vicinity and other personnel, as appropriate;</p> <p>h) The protective equipment and emergency equipment to be used and/or worn by a person who takes part in the rescue of a person from the confined space or in responding to other emergency situations in the confined space; and,</p> <p>i) Regular conduct of emergency response drills and exercises.</p>
	Training
445	<p>All persons involved in confined space entrance activities must complete-a confined space training program that includes, at minimum, the following components:</p> <p>a) This Part of the regulations;</p> <p>b) Definition of confined spaces with identification of confined spaces and their hazards;</p> <p>c) Hazard assessment;</p> <p>d) Confined space work permit systems and standard procedures;</p> <p>e) Familiarization with the operation of gas monitoring equipment;</p> <p>f) Atmospheric testing;</p> <p>g) Methods to safely ventilate and/or purge confined spaces;</p>

	<ul style="list-style-type: none"> h) Isolation requirements for substances, energy and equipment; i) Duties of supervisors and entrants; j) Confined space safety watch responsibilities; k) Entrant tracking; l) Overview of rescue and emergency response (including rescue plan); m) Emergency Escape Breathing Devices; n) Identification and use of appropriate confined space PPE and rescue equipment; o) Hot work and other hazardous activities. p) Practice in the use of confined space entry procedures and equipment and in identifying confined space hazards, appropriate testing methods and equipment, and protection systems for work activities.
446	Training program must be renewed, at minimum, every three years.
447	<p>Prior to entering or attending a confined space, the employer shall provide every employee with instruction and training in</p> <ul style="list-style-type: none"> a) the procedures established for confined space entry and for emergencies; b) control measures and PPE to be utilized while in a confined space and during an emergency; and c) the specific hazard(s) that have been identified as potentially existing within the confined space they are about to enter.
448	<p>Any person tasked with emergency response and rescue from a confined space shall be trained in:</p> <ul style="list-style-type: none"> a) Applicable emergency response training; b) Applicable Emergency response procedures; c) Meet or exceed the requirements under Sections 445 and 447; d) First aid training at a level that is appropriate for the types of emergency and first aid requirements that may be encountered ; and e) In addition, an employee who is required to enter a confined space shall be provided training in the specific hazard(s) that have been identified as potentially existing within the confined space they are about to enter.
	Confined Space Atmosphere
449	<p>The atmosphere within the confined space must meet the following:</p> <ul style="list-style-type: none"> a) An employee’s exposure to harmful substances is maintained at acceptable levels that conform to the TLVs established by ACGIH; b) The level of oxygen in the confined space is not less than 19.5% and not more than 22.5%; and c) The concentration of flammable substances is maintained below 10% of the lower explosive limit (LEL) of that substance or substances, except where hot work is conducted in accordance with section 463.
	Tests
450	The employer shall appoint a competent person to carry out appropriate tests to verify the requirements

	in Section 449 can be achieved throughout the period of time that the person will be in the confined space.
451	<p>1) Atmospheric testing must be conducted, and results recorded,</p> <ul style="list-style-type: none"> a) Before initial entry and on re-entry into a confined space; b) After an interruption or change in the work procedures or space; c) At appropriate intervals; and d) Shall not exceed 12 hours between testing while work is ongoing within the space. <p>2) Where practicable, the tests shall be performed from outside the confined space.</p>
452	Where practicable, the confined space atmosphere must be is continuously monitored and any employees within the space is alerted of any changes in atmospheric conditions.
453	The employer shall ensure that tests referred to in Section 451 are performed on adjacent areas that may be affected by, or may affect, the work performed in the confined space.
454	<p>Tests shall be performed by a competent person who has been adequately educated and trained in:</p> <ul style="list-style-type: none"> a) The proper use of testing and monitoring equipment; b) Limitations of the equipment; c) Properties of the potential contaminants to be tested; and d) Any other relevant information specific to the task at hand.
455	Equipment used in testing and monitoring shall be calibrated, maintained and used according to the manufacturer’s instructions, and where the instrument requires, shall be bump tested, at minimum, every 12 hour shift.
	Precautions Prior to Entrance
456	<p>The employer shall ensure:</p> <ul style="list-style-type: none"> a) the opening for entry and exit is sufficient to allow safe passage of a person wearing personal protective equipment; b) mechanical and electrical equipment not required to perform the work in the confined space is <ul style="list-style-type: none"> i. disconnected from its power source, and ii. locked out and tagged in accordance with Part 30; c) electrical equipment required to perform the work is rated for use in a hazardous location; d) Any source, pipe and other supply lines whose contents are likely to create a hazard are blinded or disconnected to ensure that no contents are inadvertently discharged into the confined space; e) measures have been taken to ensure that, where an atmospheric hazard may arise, the confined space is continuously ventilated; f) liquid in which a person may drown or a free-flowing solid in which a person may become entrapped has been removed from the confined space; g) adequate illumination that is rated for use in a hazardous location is provided where appropriate; h) Adequate barriers are erected to prohibit unauthorized entry;

	<ul style="list-style-type: none"> i) PPE and emergency equipment identified in section 451(2)(b) are provided as close as reasonably practicable to the entrance to the confined space. j) An emergency rescue drill is completed.
457	<p>Where atmospheric gas testing under section 451 indicates presence of a harmful or explosive substance and it is not reasonably practicable to provide a safe atmosphere using engineering and administrative controls, an employer shall ensure that:</p> <ul style="list-style-type: none"> a) An employee entering the confined space is provided with and wears respiratory and personal protective equipment appropriate to the hazards likely to be encountered; b) Where a flammable or explosive gas or liquid is present all sources of ignition is eliminated; and c) Conditions are monitored to ensure protection afforded by controls remains adequate.
458	<p>The employer shall ensure that the selection, care and use of respiratory protective equipment referred to in section 457 conform to CSA Z94.4 Standard. In addition, for escape from immediately dangerous to life or health (IDLH) atmospheres, the self-contained breathing apparatus (SCBA) or Escape SCBA shall have a rated Service time in excess of the anticipated time needed to escape.</p>
459	<p>Additionally, the respiratory protective equipment used for escape purposes must be:</p> <ul style="list-style-type: none"> a) a Pressure-Demand SCBA with an audible alarm that sounds when the air supply has diminished to 20% the capacity of the unit; or b) a Multifunctional SCBA/Airline Respirator with auxiliary self-contained air supply, with a minimum rated service time of 15 minutes and the escape route shall be planned such that the time needed to escape does not exceed the rated service time of the auxiliary air supply.
	<p>Entrance into a Confined Space</p>
460	<p>The employer shall ensure that one or more attendants are:</p> <ul style="list-style-type: none"> a) assigned the employees who are entering the confined space; b) stationed outside and near <ul style="list-style-type: none"> i. The entrance to the confined space; or the one that best allows the attendant to perform his or her duties Where there is more than one entrance to the confined space; and ii. shall ensure effective record keeping of persons in and out of the confined space c) provided with a means of continuous communication with the persons in the space and with a device for summoning a rescue response; d) in regular communication with the persons in the space, as per the established plan for the confined space entry.
461	<p>An attendant shall not enter a confined space and shall</p> <ul style="list-style-type: none"> a) Not be assigned any additional duties beyond the duties outlined in (b) through (d); b) Monitor the safety of the employee in the confined space; c) Provide emergency assistance to persons inside the confined space; d) Summon an adequate response where one is required.
462	<p>Where conditions change such that the control measures provided by Sections 456 and 458 are no longer</p>

	feasible, an employee shall leave the confined space.
	Hot Work in a Confined Space
463	<p>In addition to the general requirements related to Hot Work in Part 35 , an employer shall ensure that an employee does not perform hot work in a confined space unless all of the following conditions are satisfied:</p> <ul style="list-style-type: none"> a) The atmosphere in the confined space does not contain, and is not likely to contain while an employee is inside, an oxygen content greater than 22.5%, b) The confined space work permit includes adequate provisions for hot work and corresponding control measures, c) An adequate alarm system and exit procedures are provided to ensure that employees have adequate warning and are able to exit the confined space safely where either or both of the following occur, in the case of an explosive or flammable gas or vapour <ul style="list-style-type: none"> i. The atmospheric concentrations exceeds 5% of its lower explosive limit, or ii. The oxygen content of the atmosphere exceed 22.5% by volume. d) all potential sources of flammable and explosive gases are identified and blinded and locked out, e) a competent person patrols the area surrounding the confined space and maintain a fire-protection watch in that area until all fire hazard has passed,
464	<p>In addition to the work permit documentation requirements outlined in Part 12, work permit documentation for confined spaces must also include :</p> <ul style="list-style-type: none"> a) Date and time when the tests referenced in section 451 were performed, and their results; b) Names of all employees entering the confined space and all other workers associated with the task, verifying that they have read and understood the permit; c) The method to be followed by an employee entering into, exiting from, or occupying a confined space. d) the signature of competent person(s) completing the tests identified in Section 451 e) sign-in and out sheets of all employees entering the confined space, tracked by the attendant.
465	No permit issued shall be valid for longer than 12 hours after the time the tests required under section 451 were performed.
466	An employer shall post a copy of the permit documentation required at the entrance to the confined space for the duration of the confined space occupancy.
	Confined Space Closure
467	Once the work within the confined space is complete, a competent person must verify that all personnel, tools and equipment, or other material not meant to be in the space has been removed.

	PART 37: FUELLING
468	<p>1) If any equipment is fueled in a workplace, the fueling must be done in accordance with the instructions given by the employer in a place where the vapours from the fuel are readily dissipated.</p> <p>2) Subject to subsection (3) and unless otherwise designed to allowed for it, an employee shall not fuel any equipment</p> <ol style="list-style-type: none"> in the hold of a vessel; if the engine of the equipment is running; or if there is any source of ignition in the vicinity of the equipment. <p>3) Equipment may be fueled in the hold or an enclosed space of a vessel if</p> <ol style="list-style-type: none"> one employee is in the hold or space with a suitable fire extinguisher ready for use; only those employees engaged in the fueling and the employee referred to in paragraph (a) are in the hold or space; only the minimum quantity of fuel needed to fill the fuel tank of the equipment is taken into the hold or space at one time; if the fuel is liquefied gas, the equipment is fueled only by the replacement of spent cylinders; and fuel is not transferred into containers other than the fuel tank of the equipment.
	PART 38: DIVING SAFETY
	Interpretation
	For the purposes of this Part, the term “Dive Contractor” will have the same meaning, duties and responsibilities as the “Employer”, under the Act.
	“Ambient pressure” means the external pressure on the body of a diver.
	“Compression chamber” means a pressure vessel and associated equipment designed for the purpose of subjecting humans to greater than atmospheric pressures.
	<p>“Diving physician examiner” or “DPE” means a physician who:</p> <ol style="list-style-type: none"> is licensed to practice medicine in Canada; and possesses a diploma in Hyperbaric Medicine - Diving from the Royal College of Physicians and Surgeons of Canada;
	“Dive program” means any work or activity related to the exploration or drilling for, or the production, conservation, processing or transportation of, petroleum that involves a diving operation.
	“Dive Safety Specialist” means a competent person who demonstrates extensive competence in offshore diving operations through a combination of training, knowledge, and experience and that applies this competence to the specific offshore diving project for which the appointment was issued in order to assist consulting engineers, clients, contractors, and supervisors in operational procedures, legislated due diligence requirements, quality assurance, and risk assessment.
	“Decompression table” means a table or set of tables that shows a schedule of rates for safe descent and ascent, decompression stop times, and the appropriate breathing mixture to be used by a diver during a

	dive.
	“Diving bell” means a submersible compression chamber designed for transport of personnel between the surface and the underwater dive site at atmospheric pressure or under increased pressure.
	“Dive contractor” means a diving company or firm undertaking petroleum related diving operations for which an authorization has been granted.
	“Dive team” means all divers, standby divers, and dive support personnel, including dive supervisors.
	“Dive site” means a site from which the diving operation is performed.
	“Freeboard” means the distance measured vertically downward between the top of the hull and the mean water surface at a given draft (ice or green water).
	“Hyperbaric reception facility” means a hyperbaric facility specifically designed to accept divers from the SPHL to a living complex for safe decompression.
	“Life Support Package” means a system with sufficient equipment to allow the safe decompression of divers evacuated within a self-propelled hyperbaric lifeboat (SPHL).
	“Nitrox” means a breathing mixture of nitrogen and oxygen.
	“Saturation diving” means a technique of diving that equalizes the pressure of inert gas in the body with the ambient pressure and allows extended periods of bottom time without additional decompression time required.
	“Self-Propelled Hyperbaric Lifeboat” or “SPHL” means a unit that is a combination of a pressure vessel contained within a conventional lifeboat hull having equipment to provide suitable life support to the evacuated divers for an extended period. The unit has a means of propulsion and is capable of being navigated independently.
	“Standby diver” means a diver that shall be prepared and equipped to give immediate assistance to the diver.
	“Surface-supplied diving” means a diving technique in which the diver is supplied air or nitrox by way of an umbilical.
	“Diving Physician Specialist” or “DPS” means a physician who: <ul style="list-style-type: none"> a) is licensed to practice medicine in Canada b) possesses a diploma in Hyperbaric Medicine - Diving from the Royal College of Physicians and Surgeons of Canada; and c) has completed training in saturation diving medicine from a recognized training institution.
	“Working depth” means the depth from the water surface to the diver at work.
	Planning Requirements
	Dive Project Plan
469	1) The Dive Contractor must, in consultation with the offshore manager and the Dive Safety Specialists appointed under Section 487, and, where applicable, the dive vessel master, establish, implement and maintain a written Dive Project Plan that outlines, in detail, all operational and safety elements of

the proposed dive operation, including:

- a) the nature and description of the work to be performed;
- b) A list of legislation, standards and codes of practice that the dive contractors considers applicable to the Dive Project
- c) A description of the diving operations; including the diving methods relevant for the scope of work and if relevant, include a description of dynamic positioning operations;
- d) detailed plan for how the task will be carried out;
- e) description of the hazards identified and risk assessments conducted as required under Section 470, including the required controls specific to the known hazards or the task to be performed
- f) the anticipated duration of the work, including number of hours to be worked each day and refreshment breaks;
- g) estimated and maximum time to be spent at each depth;
- h) the appropriate number of dive personnel required to safely carry-out the work;
- i) the hierarchy of command for the project;
- j) the name and qualifications of all members of the dive team, as well as any specialized training required to carry out the task;
- k) a method for communicating the Dive Project Plan to the dive team and any other persons who may be affected by the plan;
- l) any appropriate protective equipment that is to be used;
- m) dive system being used, and an assessment and identification of what components require redundancy ;
- n) a plan for familiarizing and instructing the dive team on the use of equipment to be used in carrying out the task;
- o) The results of any systematic assessments for identifying potential failure modes, consequences and appropriate mitigating measures;
- p) A table with drawing providing the safe distance to thrusters on dynamic positioning vessels;
- q) effect of weather and ocean conditions, including cold water hazards;
- r) all subsea lifts planned, and include crane operator certification requirement and drawings approved by a professional engineer for non-routine lifts;
- s) schedules for inspecting systems and the positions responsible for carrying out the inspections;
- t) Communications available at the dive site to support the provision of medical advice and ensure accessibility in an emergency situation;
- u) emergency response plan, in accordance with Section 473;
- v) Diver safe umbilical length drawings, as required;
- w) Detailed description of management of change process;
- x) identification and management of differential pressure exposure from subsea systems; and
- y) any other information that is necessary to be able to plan for safe diving operations.

Project Hazard Identification and Risk Assessment

470	<p>1) A project hazard identification and risk assessment must be carried out as part of the planning process and must take into account the hazards that may exist, and the hazards that may develop during the course of the work and the actions necessary to control and mitigate any identified hazards.</p> <p>2) The hazard identification and risk assessment must be:</p> <ul style="list-style-type: none"> a) Carried out in consultation with representatives from pertinent functions and key project personnel; b) Reviewed and accepted by both Dive Safety Specialists appointed under subsections 487(1) and 487(2); c) communicated and made readily available to all parties to ensure they are fully aware of the associated risks with the operation. <p>3) The hazard identification and risk assessment shall be amended, as necessary, to address any changes to the initial work scope or unplanned operations that may arise while the diving operation is underway. The activity must not proceed until this is completed and any necessary controls are put in place.</p>
<p>Dividing Safe Work Procedures</p>	
471	<p>The Dive Contractor must establish, implement and maintain written diving safe work procedures and instructions that address, at a minimum:</p> <ul style="list-style-type: none"> a) specific tasks to be carried out, as well as the equipment to be used; b) The outputs and findings of the hazard identification and risk assessment required under Section 470; c) diving from a dynamically positioned vessel, as applicable and in accordance with Section 472; d) the treatment of decompression illness and any planned or unplanned omitted decompression, including communication with Diving Physician Specialist; e) responding to hazardous weather or water conditions; f) aborting and resuming a dive; g) the provision and calculation of appropriate quantities of breathing mixtures required for diving, including primary, secondary and therapeutic treatments; h) the maintenance of thermal balance, including the active heating of breathing mixtures, where necessary; i) the provision and calculation allow for leakages, wastage and contingencies, and any other factor that may result in unplanned depletion of gas; j) Barriers and isolations for subsea work, where applicable; and k) any other matters that may be applicable to the planned dive activity.
472	<p>1) Where a dive operation is being executed from a dynamically positioned vessel, the dive contractor must establish, implement and maintain written safe work procedures for the vessel that includes:</p> <ul style="list-style-type: none"> a) guidance on the safe conduct of diving operations as they may be affected by the DP vessel itself; b) actions to be taken in case of changes in station keeping alert status; c) vessel operations in close proximity to other marine installations or structures; d) vessel operations where divers enter areas with physical obstacles;

	<ul style="list-style-type: none"> e) precautions to guard against thruster wash or suction effect; f) preventing equipment entanglement; g) vessel repositioning, including maximum increments for repositioning and heading change while divers in water; and h) any other information necessary for the safe execution of the dive operation. <p>2) There shall be dedicated and open communications between the Dive and DP Control Stations and each party shall inform the other immediately about any changes in operational circumstances.</p> <p>3) The vessel must be equipped with</p> <ul style="list-style-type: none"> a) an indicator continuously displaying its station keeping status; b) a visual and audible alarm system warning of station keeping status changes, both of which shall be visible on the bridge and dive control room and other critical areas as appropriate; and c) A fixed means of communication between the vessel bridge and dive control that is capable of working in the event of a total loss of power to the vessel.
	<p>Emergency/Contingency Response</p>
473	<p>1) The Dive Contractor shall develop written contingency and emergency response plans specific to the dive system and dive site to address all foreseeable emergencies identified in the hazard identification and risk assessment required under Section 470, to be followed in the event of an emergency in or near the dive site, on all of the following:</p> <ul style="list-style-type: none"> a) emergency notification protocol; b) the methods for communication and for loss of any communication; c) the rescue of a diver following an incident or emergency at the dive site or underwater area, including the location and recovery of a lost bell; d) loss of atmospheric pressure within a diving bell; e) identification of the necessary resources to implement a plan under this section; f) a medical contingency plan for emergency medical treatment, including the provision of medical care for a critically injured/sick diver under pressure, in accordance with Section 496; g) plan for emergency hyperbaric evacuation, including recovery and reception of SPHLs and medical care at that location, in accordance with Section 519; h) vessel or dive system emergencies that have the potential to jeopardize the safety of a diver; i) in-water diver emergencies including, but not limited to, an injured or unconscious diver; j) chamber system emergencies including, but not limited to, fire, loss of pressure, atmospheric contamination, or failure of life support system; k) regular conduct of emergency response drills and exercises, in accordance with Section 518; l) a method for communicating the emergency response plan to all persons who may be affected by the plans; and m) Any other information necessary for the emergency preparedness and the safe execution of emergency response. <p>2) Detailed emergency procedures covering all emergency scenarios shall be readily available to all relevant personnel on board.</p>

	Operational Requirements
474	The following is prohibited: a) SCUBA operations b) surface-supplied diving using a helium-oxygen breathing mixture.
475	1) Surface supplied air or nitrox diving shall not exceed 50 MSW or partial pressure of oxygen (PPO ₂) of 1.4 ATA (atmosphere absolute). 2) For all surface oriented diving operations a double-lock compression chamber shall be ready for use at the dive site. Diver must be able to reach maximum depth in the chamber within time limits as specified in diving tables, required under Section 479. 3) For diving operations from a small craft (daughter vessel), transit time from surface to the deck decompression chamber or the sick-bay on the mother vessel must not exceed 15 minutes.
476	1) When conducting a dive operation, a means to effectively locate, assist and recover all divers shall always be available in the event of a lost bell. 2) A diving bell shall be capable of sustaining the lives of trapped divers and protecting against hypothermia for at least 24 hours. 3) A diving bell shall be equipped with a location device using the International Maritime Organization (IMO) recognized frequency to enable rapid location if the bell is lost. 4) The main umbilical system of a diving bell must be fitted with suitable protective devices to control loss of diving bell atmosphere if any of the components in the umbilical are ruptured.
	Duration of Dives and Periods of Rest
477	In planning the dive activities, the Dive Contractor must conform to the time limits for saturation exposure limits outlined in CSA Z275.2 <i>Occupational Safety Code for Diving Operations</i> .
478	1) Standby divers must have had, except in the event of an emergency, 12 continuous hours off since a previous dive; 2) Notwithstanding the above, standby divers shall not have any residual inert gas as calculated by the decompression table in use.
	Decompression
479	Decompression must be carried out in accordance with decompression tables appropriate for the type and depth of diving, developed to minimize potential decompression sickness, and approved by the Diving Physician Specialist.
480	The Dive Contactor must have a program and procedures in place, and training provided, for decompression that will minimize any illness or adverse effects on the diver, and it must consider repetitive factor of an air dive and residual inert gases of any diver.

481	Accelerated decompression must only be used in extenuating, emergency circumstances.
482	Notwithstanding Section 519, in the event of an emergency, the Dive Contractor shall ensure that life support for divers is maintained for the duration necessary to complete evacuation, recovery, decompression and bend watch.
483	<ol style="list-style-type: none"> 1) A diver must not fly within 24 hours after a dive. 2) Notwithstanding the above, in the event of an emergency or where the diver has suffered decompression sickness, air travel must be approved by the Diving Physician Specialist, regardless of the time that has elapsed.
484	Decompression facilities must be suitable to accommodate the entire number of divers completing their decompression, as well as any other people needed to carry out decompression or medical care.
485	<p>A surface compression chamber must:</p> <ol style="list-style-type: none"> a) be designed and constructed to be fit for the purpose and to ensure safety; b) provide a suitable environment for its occupants, including amenities appropriate to the type, depth and duration of the diving operation; c) contain sufficient space in at least one of its compartments to enable at least two occupants to lie down comfortably in the compartment and, if a person will be in the surface compression chamber for a period of: <ol style="list-style-type: none"> a. eight consecutive hours or less, have an internal vertical diameter of at least 1.5 m; or b. More than eight consecutive hours, have an internal vertical diameter of at least 2 m; d) be equipped with a medical lock; e) be fitted with adequate equipment, including facilities for <ol style="list-style-type: none"> i. supplying to and maintaining for its occupants an appropriate breathing mixture, ii. lighting heating and cooling the compression chamber, iii. communications, and iv. removing carbon dioxide.
	Personnel and Qualifications
	Dive Team Size and Composition
486	<ol style="list-style-type: none"> 1) The Dive Team must be appropriately sized, taking into consideration the hazard and risk assessment required under Section 470, with sufficient qualified personnel available to operate and maintain all the equipment and to provide support functions to the diving team. 2) Notwithstanding the above, for saturation programs, a minimum of two dive supervisors must be on shift at all times during active diving activities. In situations where breaks are required, a minimum one supervisor and one additional competent person shall be in dive control at all times.


	Dive Safety Specialists
487	<p>1) The Operator shall designate, in writing, a Dive Safety Specialist who</p> <ul style="list-style-type: none"> a) Must be available <ul style="list-style-type: none"> i. During the planning phase prior to the commencement of the dive program to advise on safety aspects of the diving operation, and ii. at all times at the dive site during the execution of the diving program to advise on any matter related to the safety of the diving program; b) Is independent of any dive contractor involved in the diving program, and c) Is not the same person who has been appointed by a dive contractor as the Dive Safety Specialist under subsection (2); <p>2) If all or part of a dive program is carried out by a dive contractor on behalf of the Operator, the dive contractor must appoint, in writing, a Dive Safety Specialist who</p> <ul style="list-style-type: none"> a) Must be available <ul style="list-style-type: none"> i. During the planning phase prior to the commencement of the dive program, and ii. at all times at the dive site during the execution of the diving program, to advise on any matter related to the safety of the diving program, or those portions of it, carried on by the contractor on behalf of the operator; b) Is independent of Operator, and c) Is not the same person who has been appointed by the Operator as the Dive Safety Specialist under subsection (1). <p>3) The DSS appointed by the dive contractor must not have any other role assigned to them for the period of time that the dive activity takes place, unless that role is considered to be a significantly senior role on board.</p>
	Diving Physician Specialist
488	<p>A Diving Physician Specialist must be</p> <ul style="list-style-type: none"> a) Capable of providing medical advice and assistance for all reasonably foreseeable events that the dive program may encounter b) readily available on a 24 hour basis for medical advice and for transportation to the dive site to provide medical treatment c) capable of advising and administering medical treatment to a diver in a compression chamber.
	Qualifications, Training and Competency
489	<p>Each position in the dive team, and any ROV pilot, where ROVs are deployed in the diving operation, must conform to the competencies outlined in CSA Z275.4 <i>Competency Standard for Diving, Hyperbaric Chambers and Remotely Operated Vehicle Operations</i>.</p>

490	<ol style="list-style-type: none"> 1) All divers, dive supervisors and dive safety specialists shall hold valid diving competency certificates issued by a Canadian certifying body, acceptable to the CSO. 2) The acceptable Canadian certifying body shall: <ol style="list-style-type: none"> a) maintain a quality assurance program governing the policies and procedures for accrediting diver training schools and dive team members, certified by an accredited registrar to a recognized quality management system standard; and, b) issue certificates at the appropriate level of competency 3) The CSO has the authority to conduct audits or appoint a qualified third party to carry out such, at the Certifying Body’s premises.
491	<ol style="list-style-type: none"> 1) All divers and supervisors shall hold current certification in standard first aid, as well as first aid oxygen administration. 2) For saturation diving programs, all divers shall have diver medical technician certificate of competence. 3) For surface supplied diving programs, a sufficient number of persons possessing diver medical technician certificate of competence shall be available to ensure at least one Diver Medical Technician is available at all times.
492	Personnel certification and qualifications documentation shall be readily available.
Health, Safety and Working Environment	
Fitness to Work	
493	All divers must be certified as physically and medically fit to dive by a diving physician examiner or diving physician specialist prior to performing their duties in a dive program, with medicals issued within the past 12 month period and remain valid for the duration of the work period; and, divers must disclose any change to their medical condition since their last assessment.
494	<ol style="list-style-type: none"> 1) Pre- and post-dive medical checks, in accordance with procedures approved by the Diving Physician Specialist, shall be conducted routinely for all divers. 2) For saturation divers these checks shall be performed upon entering the compression chamber and immediately after exiting the chamber after decompression, and for surface supplied divers prior to and after completion of work rotation.
First Aid & Medical Supplies and Equipment	
495	In addition to what is required under Part 6), the Dive Contractor, in consultation with the Diving Physician Specialist, shall ensure sufficient supply of first aid and medical supplies, equipment and medications are available at the dive site, for all reasonably expected injuries and illnesses that could occur and that were

	identified in the Hazard Identification and Risk Assessment.
	Medical Contingencies
496	<p>1) The Dive Contractor shall establish a system for handling medical contingencies in connection with the planned dive operations. The medical contingency plan shall be approved by the Diving Physician Specialist and shall address</p> <ol style="list-style-type: none"> a) handling of all acute medical problems in diving operations b) plan for hyperbaric evacuation, where applicable, in accordance with section 519, c) how to return personnel to surface pressure and give required medical treatment during decompression period, d) how medical treatment can be given to personnel under pressure, e) the type of drills and how they are to be carried out in order to handle an incident or a hazardous situation. <p>2) All personnel shall be made aware of the medical contingency plans required in subsection (1) and drills, and any necessary training required, on these plans shall be conducted regularly.</p>
	Medical Monitoring and Communications
497	<p>1) The Dive Contractor shall ensure that the Diving Physician Specialist:</p> <ol style="list-style-type: none"> a) is able to communicate directly with a diver inside the compression chamber, b) has visual and auditory aids to observe and examine the divers when needed, and c) has remote access to monitoring or clinical assessment technologies, as technology permits. <p>2) The person performing advanced first aid shall have priority and unimpeded access to suitable communication devices with the specialized diving physician, or any other competent personnel as may be required.</p> <p>3) Internet bandwidth (data transfer rate/communication access and speed) must be sufficient to provide chamber monitoring that allows the results of ongoing medical testing, such as electrocardiograms, to be transferred to the Diving Physician Specialist. This shall be tested and proven before the diving program commences.</p>
	Diver Locator
498	The Dive Contractor shall ensure a means exists that permits a diver's location to be constantly known in the water.
	Hazardous Substances
499	The Dive Contractor shall document a system to ensure that all materials utilized in chambers, bells and breathing circuits etc., do not contain or produce gases or vapours that may be harmful to the divers during normal operational conditions.

	Standby Diver Equipment
500	Standby divers shall be equipped with suitable diving equipment appropriate to the standby function.
	Thermal and Humidity Exposure
501	<ol style="list-style-type: none"> 1) The Dive Contractor must ensure: <ol style="list-style-type: none"> a) all dive team members are made fully aware of the hazards of cold water on a diver and appropriate emergency response to any loss of heating; b) Thermal control systems are in place and shall have the capacity and the accuracy to ensure thermal balance and comfort for the divers during all phases of a normal dive, including sufficient heating supply redundancy. c) Redundant, active heating is in place for breathing mixtures, where heating is applicable; 2) In the event of loss of thermal balance in diver, equipment or breathing mixture, or in the event there is any loss of hot water, even if the loss is expected to be temporary, the dive is to be suspended immediately and divers are to return to the diving bell or surface, as applicable. 3) Life support systems for living chambers shall have the capacity to control the relative humidity to between 40% and 60% at all depths the system may operate and with a full complement of divers in the chambers.
	Seismic Activity
502	<ol style="list-style-type: none"> 1) Where seismic activity is planned within the vicinity of a dive site: <ol style="list-style-type: none"> a) The Operator must ensure the Dive Contractor is aware of any seismic activities near the dive site; b) a risk assessment must be conducted by the dive contractor to assess the risk to the divers health prior to the commencement of the diving operation; c) where there is a risk identified in the risk assessment, the diving contractor must communicate with seismic vessels or other installations conducting seismic activities, so that both are aware of each other's work program. 2) No dive activity shall proceed if the risk assessment has determined that the divers may be exposed to noise levels beyond maximum allowable levels prescribed by ACGIH.
	Contaminated Working Environment
503	When diving in locations where the seabed or seawater may be contaminated, a risk assessment must be carried out to ascertain the level of contamination and measures put in place to protect the health and safety of the divers.

	Technical Requirements
	System for Failure Detection
504	<p>1) The dive contractor shall ensure there is a system in place for active monitoring of critical components and equipment of the diving system that provides indications in the dive control room of the status of the system.</p> <p>2) A system for recording and tracking dive system and diver equipment failures must be established, implemented and maintained.</p> <p>3) Any failure detected, including failures detected during routine, pre-dive checks (documented in checklists/logs) must be documented in the system.</p>
	Communications
505	All dive team members, as well as the emergency response team both offshore and onshore, must be able to effectively communicate with one another at all times in order to safely execute the activity, including any emergency response required, and the ability to obtain medical attention, if needed.
506	For communications between the dive supervisor and any diver involved in the diving operation, a primary communication system must be used that <ul style="list-style-type: none"> a) is dedicated; b) has sound quality adequate to enable breathing to be clearly heard and oral communications to be clearly heard and understandable; c) is equipped with a voice descrambler in the event that a breathing mixture contains a substance that distorts voice transmissions; d) a recording device that continuously records all verbal communications while a dive is in progress.
507	There shall be communication system redundancy such that the dive supervisor and the divers are able to communicate in the event of a failure of the primary communication system.
508	The diving supervisor shall have dedicated and open two- way audible / voice communications with the bridge and other relevant operational activity personnel at all times, including in the event of total loss of power
509	If an ROV is in use in conjunction with diving operations, there shall be a dedicated and open communications link between the diving supervisor and the ROV operator and the diving supervisor shall have a monitor in dive control room displaying the same picture as the ROV operator.
	Monitoring
510	The Dive Contractor shall ensure that: <ul style="list-style-type: none"> a) the breathing patterns of divers are monitored at all times; and,

	b) visual monitors are employed that permit the dive supervisor to observe the divers activities.
511	<ol style="list-style-type: none"> 1) The internal atmosphere of a diving bell must be continuously monitored to ensure contaminants do not exceed levels that may become toxic at depth. 2) The dive contractor shall ensure that diving bell atmosphere monitoring includes redundancy both internally and in dive control. . 3) Diving bell oxygen and carbon dioxide levels must be continuously analyzed and recorded hourly as a minimum.
	Breathing Mixtures
512	The dive contractor must ensure an adequate quantity of breathing mixture is available at all times during the diving operation, including sufficient quantity to ensure the complete diving operation, an adequate quantity of reserve supply and an additional adequate supply for use in the event of an emergency.
513	A breathing mixture supply system used for a dive must be appropriate for the depth and circumstances of the dives, but at minimum, any calculations for diver gas consumption shall be set no lower than 42.5L per minute.
514	Compressed breathing air mixtures, reserve supply quantities and the analysis of the air shall conform to CSA Z275.2 <i>Operational Safety Code for Diving Operations, Appendices A-D</i> or BS EN 12021 <i>Compressed Air Breathing Quality</i> 
515	<ol style="list-style-type: none"> 1) The Dive Contractor shall ensure that each diver's breathing mixture is of the correct composition, quality, temperature and flow for all foreseeable situations including independent primary and secondary supplies. Gas supplies shall be arranged so that individual divers' supply can be independently isolated. 2) A competent member of the dive team must analyzes the oxygen content of breathing mixtures upon delivery of the gas and immediately prior to use; 3) Any breathing mixture containing more than 25% oxygen by volume shall be handled as if it were pure oxygen. 4) A means of analyzing the divers breathing mixture must be available at the last point on the dive panel prior to being supplied to the divers. At a minimum the breathing mixture must be constantly analyzed for oxygen and carbon dioxide content. The analyzers must have an audible high and low level alarm function. 5) Diving shall be terminated if the gas quantities fall below acceptable minimums for safety.

	Gas Cylinders and Storage
516	<ol style="list-style-type: none"> 1) Gas cylinders must be suitable in design, fit for purpose and safe for use. Each cylinder shall be tested and have appropriate certification issued by a competent person. 2) All gas storage units must comply with Canadian or international standards of colour-coding and marking of gas storage cylinders, quads and banks. Whatever standard is employed it shall be consistent for the project and readily identifiable. Where appropriate, pipe work shall also be colour-coded. 3) Adequate fire protection shall be provided for gas storage areas.
	Diver Access – Surface Supplied Diving
517	<ol style="list-style-type: none"> 1) When diving from a marine installation or structure, a risk assessment shall be carried out to establish whether there are any hazards to the divers when entering or exiting the water. 2) If no hazards are identified and where the freeboard is less than 2 metres then one or the other then one of the following can be used to deploy a diver: <ol style="list-style-type: none"> a) A wet bell with a secondary system for deploying the standby diver, b) a secured ladder that extends at least 2 metres into the water, or c) An alternate means that affords equivalent or better protection than (a) or (b). d) Where the risk assessment identifies potential obstructions that could be hazardous to the diver, or where the freeboard is more than 2 metres then a recovery system capable of recovering all divers must be available.
	Emergency Preparedness
	Emergency Drills and Exercises
518	<ol style="list-style-type: none"> 1) The Dive Contractor shall establish and implement a program for routine training, exercises and drills with respect to all reasonable foreseeable dive emergencies to ensure a high level of emergency preparedness, which shall include, at minimum: <ol style="list-style-type: none"> a) diver evacuation drill including, where applicable, boarding of a SPHL, shall be conducted prior to, or shortly after, commencement of operations and on a monthly basis thereafter if the duration of the dive program is longer than a month. b) SPHLs shall be launched and manoeuvred in the water at intervals not exceeding 6 months. c) Drills involving location and recovery of a lost bell shall be carried out prior to, or shortly after, commencement of operations and on a quarterly basis thereafter if the duration of the dive is longer than 3 months. d) The dive team shall practice the procedures for dealing with a diver who has suffered injury or decompression sickness, on a monthly basis.

	<p>e) drills shall be completed on the diving vessel on a monthly basis, covering different scenarios such as fire, flooding, and loss of dynamic positioning capability.</p> <p>2) Emergency drills and exercises shall be carried out at planned intervals to train personnel in, and test the adequacy of, the emergency response equipment, procedures and arrangements for any additional emergency scenarios identified in the hazard identification and risk assessment, but no less than on a monthly basis.</p>
	<p>Hyperbaric Evacuation</p>
519	<p>1) In the event of hyperbaric evacuation, the most expeditious manner to get the self-propelled hyperbaric lifeboats (SPHLs) back to shore must be used.</p> <p>2) A Hyperbaric Reception Facility must be available and on standby for the entire saturation dive project and the post decompression bend watch period.</p> <p>3) Saturation dive systems must include an appropriate arrangement in terms of size, capacity and location, and must include a minimum of two self-propelled hyperbaric lifeboats (SPHLs).</p> <p>4) Hyperbaric life boats must be equipped with enough gas and consumables to maintain life for a minimum of 72 hours.</p> <p>5) In the event of a hyperbaric evacuation, the hyperbaric life boats must be transferred to the hyperbaric reception facility as soon as possible, but at maximum, within 75% of 72 hours.</p> <p>6) A trial fit of the hyperbaric life boats to the hyperbaric reception facility transfer trunking shall be completed to test and verify the compatibility of the self-propelled hyperbaric life boats and the hyperbaric reception facility:</p> <ol style="list-style-type: none"> a) Prior to commencing dive operations with the particular life boats and reception facility. b) Following any modification to the reception facility or life boats that could affect the fit and/or compatibility.
520	<p>1) A Life Support Package must be on standby at a suitable location and ready for deployment in the event of a hyperbaric evacuation in the hyperbaric life boats.</p> <p>2) The Life Support Package must be designed to extend the life support capabilities of the hyperbaric life boats beyond the time needed to ensure all divers are able to be fully decompressed.</p>
521	<p>1) For a saturation dive program, the Dive Contractor must :</p> <ol style="list-style-type: none"> a) conduct a risk assessment covering the launch, stabilization, recovery and normalization phases of an evacuation; and b) develop, based on the risk assessment, a detailed plan for hyperbaric evacuation of divers, specific to the dive vessel and must include, at minimum: <ol style="list-style-type: none"> i. all relevant procedures including those related to the recovery and transport of the hyperbaric life boats to the reception facility;

	<ul style="list-style-type: none"> ii. plans to resupply the SPHL to prevent its onboard resources being depleted; and iii. emergency contact information. <p>2) Training on the plan must be provided, and the plan must be readily accessible, to:</p> <ul style="list-style-type: none"> a) all dive team members b) Dive Safety Specialists c) Dive medical technicians d) Diving physician specialist e) the Dive Control room f) on the bridge of the vessel, g) at the hyperbaric reception facility h) in the operator emergency response center; i) on board primary rescue vessel (s); and, j) at the Joint Rescue Co-ordination Centre (JRCC).
	<p>Records and Reporting</p>
522	<p>1) The Dive Contractor shall retain a record of all dives.</p> <p>2) Every diver engaged in a diving activity shall maintain a diver logbook.</p> <p>3) All relevant records and diver logbooks must</p> <ul style="list-style-type: none"> a) contain the details of each task and the diving program and are signed by the relevant party immediately after each entry, and b) record the names and job titles of the persons responsible for the various aspects of the dive program <p>4) Records and diver logbooks must be retained in accordance with Section 18.</p> <p>5) Medical history records of divers shall be made available to the Diving Physician Specialist in the event of an emergency.</p>
523	<p>All audio and visual communications must be recorded and all recordings must be kept for at least 48 hours after the diver has returned to the surface or the saturation living chamber.</p>
524	<p>Notwithstanding the above (Section 523), where an incident has occurred during a dive program, communications records including all audio and visual recordings must be retained indefinitely by the Operator and the Dive Contractor.</p>