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OF PETROLEUM PRODUCERS

STANDARD PRACTICE

Atlantic Canada Offshore Petroleum Industry

Standard Practice for the Training and Qualifications of Personnel

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The Canadian Association of Petroleum Producers (CAPP) represents companies, large and small, that explore for, develop and produce natural gas and crude oil throughout Canada. CAPP's member companies produce about 90 per cent of Canada's natural gas and crude oil. CAPP's associate members provide a wide range of services that support the upstream crude oil and natural gas industry. Together CAPP's members and associate members are an important part of a national industry with revenues of about \$100 billion a year.

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Disclaimer

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Overview

The Atlantic Canada Offshore Petroleum Industry: Standard Practice for the Training and Qualifications of Personnel (Standard Practice) is the culmination of a joint effort among the offshore petroleum industry, drilling contractors and regulatory authorities to produce a single document containing a concise description of the minimum qualifications and certificated safety training required of individuals working in Atlantic Canada's offshore petroleum industry.

This Standard Practice provides the mandatory safety training requirements for all offshore personnel; the technical training required for specific roles; emergency team composition, training and offshore drills/exercises; and the qualifications for various offshore positions for producing installations, drilling installations and marine vessels.

While this Standard Practice is a capture of industry requirements for the safety training and certification of the offshore workforce, it is not intended to be all inclusive and simple adherence to the Standard Practice is not sufficient to ensure an operator's or employer's obligations pursuant to relevant applicable legislation. The Standard Practice does not, for example, cover all aspects of training and competency assurance as it relates to internal company procedures, processes and equipment. Operators and employers must exercise due diligence to ensure all workers are properly trained to deal with all hazards and to complete all safety critical tasks.

Acknowledgements

The members of the Training and Qualifications Committee are recognized and acknowledged for their continuous efforts in reviewing and ensuring the requirements for training and qualifications of offshore personnel are appropriate.

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1 General Guidance

1.1 Introduction

This Standard Practice provides the industry requirements for safety training and certification as follows:

- mandatory safety training for all personnel on all petroleum installations (Section 2), including training requirements for visitors to offshore installations (Section 2.5);
- emergency preparedness requirements and emergency team training for all petroleum installations (Section 3);
- technical training for specific requirements on all petroleum installations (Section 4);
- drilling installation position-specific qualifications and training requirements (Section 5);
- production installation position-specific qualifications and training requirements (Section 6); and
- standby and support vessel position-specific qualifications and training requirements (Section 7).

Further, this Standard Practice defines procedures for exemptions and equivalencies and outlines the responsibilities of the management committee (i.e. the Training and Qualifications Committee) to maintain the Standard Practice, including consultation and approval processes for changes in requirements. As guidance for users of this Standard Practice, the Training and Qualifications Committee produces a listing of recognized certificates published separately.

This Standard Practice is updated and re-published, if necessary, every 2 years. On occasion, a change is required between publications; in these instances an addendum will be issued and published on the CAPP website.

1.2 Scope

The requirements contained within this Standard Practice have been made sufficiently broad to allow their application to each type of installation and vessel likely to operate in the Atlantic Canada offshore area (refer to Section 1.3 for definition of area).

1.3 Definitions

For the purposes of this Standard Practice, the following definitions apply:

Atlantic Canada Offshore Petroleum Area	Refers to the combined offshore area regulated by the Canada-Nova Scotia Offshore Petroleum Board (link: CNSOPB) and the Canada-Newfoundland and Labrador Offshore Petroleum Board (link: C-NLOPB)
Operator	A person or company who has applied for or has been issued a Work or Activity Authorization by either the Canada-Newfoundland and Labrador Offshore Petroleum Board or the Canada-Nova Scotia Offshore Petroleum Board
Visitor	An individual who is not a regular rotational employee, has not completed a course in Basic Survival Training (BST), and who will not exceed 7 days (6 nights) offshore during a 12-month period (refer to the Offshore Survival Introduction training Section 2.5)
TQC	Training and Qualifications Committee; the management committee established to maintain this Standard Practice. Refer to Section 1.4.2 for further definition and to the TQC Terms of Reference contained within this Standard Practice

*refer to the Glossary for definitions of technical terms used within this Standard Practice

1.4 Roles and Responsibilities

1.4.1 Operators

Operators of offshore projects have the responsibility of ensuring their operations comply with the requirements set out in this document, and should establish sufficient internal controls that will enable them to assess the adequacy of the training and qualifications of project personnel and ensure they remain compliant and competent for the duration of the project.

1.4.2 Standard Practice Management Committee

A Standard Practice management committee comprised of industry and government representatives will review this document on a regular basis. The committee, called the

Atlantic Canada Offshore Petroleum Training and Qualifications Committee (TQC), will have a defined Terms of Reference published within this Standard Practice and shall operate with the purpose of:

- reviewing the Standard Practice on an ongoing basis to ensure appropriate definition of safety training and certification as required by operators for offshore workforce personnel;
- consulting with relevant stakeholders, such as the offshore workforce and educational and training institutions, as training requirements are defined or reviewed; and
- recommending revisions to the document as deemed appropriate and seeking approval of the revisions in accordance with an agreed upon amendment process (refer to the TQC Terms of Reference within this Standard Practice).

1.5 Offshore Workforce Engagement Protocol

The Training and Qualifications Committee (TQC) engages the offshore workforce by sending proposed changes and updates, via the installation owners' Joint Occupational Health and Safety (OH&S) Committees, for review and comment. The Committee will endeavour to send a Change Request summary to the Joint OH&S Committees at least 45 days prior to approval. Comments will be accepted for review as part of the approval process.

Periodic updates, via plain language "presentations type" communications, will be issued via the operators and owners to the various Joint OH&S Committees on all installations active in Atlantic Canada.

The TQC will endeavour to provide feedback to the OH&S Committees that provide comments.

1.6 Accreditation

Neither the TQC or CAPP accredits or approves courses or training institutions; nor do the TQC or CAPP formally audit courses. The TQC monitors, to the best of its ability, the quality of course delivery through the resources and participation of committee members and has instigated a quality review process for various safety courses required by this Standard Practice that do not have independent or third party audits/reviews (Refer to Section 1.7).

1.7 Course Quality Reviews

The TQC evaluated the safety training courses required by the Standard Practice and identified several that are not accredited or audited by third party independent means. The

TQC then commissioned a process whereby training institutions in Atlantic Canada offering any of these specific courses are reviewed for quality. The ‘quality review’ is conducted following specific and defined processes and the courses are reviewed against defined criteria.

The outcome of each quality review is an assessment of whether the course as offered meets the intent of the Standard Practice and includes any identified recommendations for improvements in quality. The quality review process is ongoing, managed by the TQC and has included, to date, the following courses for review:

- Offshore Survival Introduction (OSI)
- Basic Survival Training (BST)
- Basic Survival Training – Recurrent (BST-R)
- Helicopter Landing Officer (HLO)
- Offshore Fire Team (OFT)
- Offshore Fire Team – Recurrent (OFT-R)
- Rescue Boat Team (RBT)
- Survival Craft Coxswain
- Hazardous Area Equipment Training
- Helicopter Underwater Emergency Breathing Apparatus (HUEBA)

1.8 Recognized Certificates

Where a training requirement is specified by this Standard Practice, the TQC may identify course certificates that are recognized as meeting that requirement. These certificates are listed within a separate document published by the TQC.

This document also provides notes regarding specific training, including, where appropriate, discussion about what is considered equivalent training from other jurisdictions.

This list of recognized certificates is maintained by the TQC in conjunction with this Standard Practice and is provided as guidance only.

1.9 In-House or Third Party Training

The energy authorities will, as per the TQC’s Terms of Reference, accept any properly documented in-house or third party training course that meets the objectives and requirements set out in this Standard Practice.

1.10 CAPP Medical Assessment for Fitness to Work Offshore

CAPP publishes an *Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide*. The Guide provides the medical assessment requirements for all individuals prior to and throughout their work offshore.

Note: for some training courses listed within this Standard Practice there is a medical assessment pre-requisite. In these instances, medical assessments meeting the CAPP Guide is listed as an option to fulfill this pre-requisite. However training providers may accept other medical assessments to meet the training pre-requisite. It is advised that individuals contact their employer or operator and the training provider to determine the most appropriate approach for medical assessment in their circumstance.

1.11 Contact Information

Comments or queries relating to the information presented in this Standard Practice should be directed to the Atlantic Canada Manager, Canadian Association of Petroleum Producers, Suite 403, Scotia Centre, 235 Water Street, St. John's, NL A1C 1B6 or by email to atlantic.communication@capp.ca.

2 Mandatory Safety Training for All Personnel on All Petroleum Installations

This chapter outlines the requirements for safety and emergency preparedness training for all individuals who work any installation operating in Atlantic Canada's offshore area.

The following training is included in this chapter:

2.1	Basic Survival Training (BST)	7
2.2	Basic Survival Training – Recurrent (BST-R).....	8
2.3	Helicopter Underwater Escape Breathing Apparatus (HUEBA).....	10
2.4	Helicopter Underwater Escape Training	11
2.5	Hydrogen Sulphide (H ₂ S).....	12
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2.1 Basic Survival Training (BST)

Course Objectives

To provide personnel with a basic understanding of the hazards associated with working in an offshore environment, the knowledge and skills necessary to react effectively to offshore emergencies, and the ability to care for themselves and others in a survival situation.

Applies To

The entire complement of an offshore installation, including all permanently or regularly assigned members of the crew, third party contractors and shore based personnel whose duties are such that they have to occasionally travel offshore.

Note: This course must be completed prior to an employee's first tour of duty offshore. However, because of the intermittent nature of employment and course scheduling, operators may occasionally have to avail of the exemption procedure outlined in this document. Persons so exempt must receive the "Helicopter/Vessel Safety Briefing" and the "Installation Safety Induction" referred to in section 3.1.2 and 3.1.3, and must each be closely supervised for the duration of their tour of duty offshore.

Course Duration

Five (5) days

Prerequisites

A Current Medical Certificate as per CAPP's East Coast Medical Assessment for Fitness to Work Offshore Guide or as required by the Training Institution

Renewal

Three (3) years

Course Content

Refer to the following sections:

11.5 Table 2 BST competencies

11.4 equipment requirements

2.2 Basic Survival Training – Recurrent (BST-R)

Course Objectives

To provide for continued proficiency in the use of safety, survival and rescue equipment and techniques, and to update individuals with respect to advancements in equipment technology and procedures since their previous training.

Applies To

Personnel who are required to hold a valid Certificate in Basic Survival Training (BST), and who wish to maintain the validity of their Certificate.

Note: Individuals who do not complete BST-R prior to the expiration of their BST Certificate are required to repeat the five (5) day course. However, because of the intermittent nature of employment and course scheduling, a reasonable extension may be permitted upon review and approval by the training institute. In order for the training institute to consider a request for extension, the following criteria must be provided, at a minimum:

- 1. Written request by the operator submitted to training institute before expiry of the certificate.*
- 2. Reasonable rationale for the request, including evidence of attempts made to complete training required before certificate expiry (or explanation provided for why this was not possible).*
- 3. Before the expiry of the certificate, the individual must be registered in an upcoming refresher course.*

Course Duration

Two (2) days.

Prerequisites

- A Current Medical Certificate as per CAPP's East Coast Medical Assessment for Fitness to Work Offshore Guide or as required by the Training Institution
- A valid Basic Survival Training (BST) Certificate, or equivalent

Note: Personnel entering the jurisdiction with a current OPITO approved "Further Offshore Emergency Training" (FOET) certificate or an OLF approved "Basic Safety and Emergency Training, Refresher" certificate will be required to complete the BST-R. The BST-R certificate will be valid for three (3) years from the date of issue.

Note: Certificates issued for the successful completion of the OPITO- and OLF approved courses will be considered valid for a period of three (3) years from date of issue.

Renewal

Three (3) years.

Course Content

Refer to Section 11.6 Table 3 BST-R competencies

2.3 Helicopter Underwater Escape Breathing Apparatus (HUEBA)

Course Objectives

To provide a theoretical and practical understanding of the compressed air HUEBA in use in the Atlantic Canada offshore petroleum industry. Objectives include lecture and progressive practical competencies.

Applies To

Everyone flying to the offshore area

NOTE: HUEBA competencies are a component of the BST, BST-R and OSI courses; if not obtained through one of those courses, stand-alone training must be completed

Note: HUEBA surface training: less than one meter of water

Prerequisites

A Current Medical Certificate as per CAPP's East Coast Medical Assessment for Fitness to Work Offshore Guide or as required by the Training Institution

Renewal

Three (3) years or at time of next safety course (BST, BST-R, OSI)

Course Content

Refer to Section 11.3 Table 1 Competence for BST, BST-R and OSI
Competence ID: all of Section 2.5

2.4 Helicopter Underwater Escape Training (HUET)

Applies To

Everyone flying to the offshore area

NOTE: HUET competencies are a component of the BST, BST-R and OSI courses; if not obtained through one of those courses, stand-alone training must be completed

Course Objectives

This course is designed to provide helicopter underwater escape training.

Co-requisites

Helicopter Underwater Escape Breathing Apparatus (HUEBA) Training

Course Content

Refer to Section 11.3 Table 1 Competence for BST, BST-R and OSI
Competence ID: all of Sections 2.1 through to and including 2.4

2.5 Hydrogen Sulphide (H₂S)

Course Objectives

To provide personnel with an awareness of the dangers associated with hydrogen sulphide (H₂S) gas and the appropriate response measures to be taken should it be encountered.

Applies To

All personnel traveling to an installation, except visitors as defined by this document.

Note: Where the operator of a production installation can demonstrate that hydrogen sulphide is not present in the reservoir, one time in-house familiarization training may be substituted until such time production activities indicate the presence of hydrogen sulphide.

Course Duration

One (1) day

Prerequisites

None

Renewal

Three (3) years

Course Content

- Characteristics of H₂S
- Symptoms of H₂S poisoning
- Exposure limits and toxicity levels
- Methods of detecting and monitoring H₂S
- Operation and maintenance of breathing apparatus
- Response strategy
- Rescue techniques
- Resuscitation

2.6 Offshore Survival Introduction (OSI) (Visitors)

Course Objectives

To provide participants with an awareness of the hazards associated with the marine environment, an understanding of their responsibilities during an offshore emergency and the ability to care for themselves in a survival situation. Persons completing this course must also receive the “Helicopter/Vessel Safety Briefing” and the “Installation Safety Induction” referred to in sections 3.1.2 and 3.1.3 and must be closely supervised for the duration of their stay offshore.

Applies To

All visitors to an offshore installation who have not completed a course in *Basic Survival Training (BST)*, and who will not spend more than seven (7) days offshore during a 12-month period.

Course Duration

One (1) day

Prerequisites

A Current Medical Certificate as per CAPP’s East Coast Medical Assessment for Fitness to Work Offshore Guide or as required by the Training Institution.

Renewal

One (1) year (Note: OSI certificates issued prior to the publication of the 2009 version of this Standard Practice maintain their validity of 3 years).

Course Content

Refer to Section 11.7 Table 4 Competence for OSI

2.7 Regulatory Awareness

Course Objectives

To provide personnel with a basic understanding of applicable safety related legislation and regulations, the regulatory system as it applies to offshore petroleum operations, their rights and obligations pursuant to the legislation and the duties and obligations of operators and employers.

Applies To

To all permanently and regularly assigned personnel.

Course Duration

There is no minimum duration set for this training, but operators must be able to demonstrate that personnel have a reasonable understanding of the material presented.

Prerequisites

None

Renewal

Training is to be updated as necessary when there are major changes in the legislation

Course Content

- An overview of applicable safety related legislation
- An overview of each of the applicable safety related regulations
- An overview of applicable guidance issued by relevant regulatory authorities
- An overview of the regulatory structure and the roles of the various regulatory bodies
- An overview of regulatory processes including such processes as Work Authorizations, Certificate of Fitness, compliance audits and enforcement
- An explanation of the powers and authority of energy authority Safety Officers
- An explanation of the internal responsibility system
- An overview of Operator and Employer duties and obligations pursuant to the legislation
- A detailed explanation of worker rights and obligations pursuant to the legislation with emphasis on the rights to know, participate and refuse and on worker obligations to work safely and report incidents and accidents
- An explanation of the “Regulatory Query” process

2.8 Workplace Hazardous Materials Information System (WHMIS)

Course Objectives

To provide personnel with relevant information with respect to the safe handling, use, storage and disposal of hazardous materials in the workplace.

Applies To

All personnel traveling to an installation, except visitors as defined by this document.

Course Duration

Minimum of four (4) hours, or as required to achieve Course Objectives.

Prerequisites

None

Renewal

No expiry

Course Content

- WHMIS legislation
- Product classification
- Supplier, employer and employee responsibilities
- Supplier and workplace labels and variations
- Material Safety Data Sheets (MSDS)
- Safe storage, handling and disposal procedures
- Emergency procedures

3 Emergency Preparedness and Response for All Petroleum Installations

Emergency preparedness and response is an organization’s last line of defense against an accidental or emergency event. There is not enough time during an emergency situation to decide who is in charge, survey outside agencies as sources of help, or exercise and train people to respond appropriately. These must be accomplished prior to the emergency.

This section is intended to provide guidance to offshore operators in the development of policies, plans and procedures that will prepare people to respond immediately and effectively to minimize the potential consequences of an emergency and, where possible, facilitate the resumption of normal operations.

Nothing herein should be construed to suggest that the person in charge of the installation or standby vessel master should, at any time, put the installation, vessel or their crews in danger, and their conduct must, at all times, be governed by the normal practice of good seamanship.

The following training and preparedness / response requirements for all installations are included in this chapter:

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3.1.3	Installation Safety Induction	19
3.1.4	Rescue Coordination Center (RCC) Briefing and Protocol	20
3.2	Emergency Action Plans	20
3.3	Emergency Response Teams	20
3.3.1	Fast Rescue Boat (FRB) Teams	21
3.3.2	Fire Teams.....	21
3.3.3	First Aid Teams.....	21
3.3.4	Helideck Teams.....	22
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3.1 Awareness Training

Regulations governing offshore operations require operators to ensure that every person employed on an installation receives instruction and training in respect of all operational and safety procedures, including those to be followed in the event of an emergency that the person may be required to carry out during the course of his employment.

To that end, offshore operators should ensure all persons who work on or visit an installation receive formal awareness training that will provide them with an understanding of the hazards associated with traveling and working offshore, and prepare them to react appropriately to an emergency or crisis situation.

Awareness training should be given in three (4) stages:

3.1.1 Offshore Orientation

An Installation Orientation is an effective tool that ensures new personnel possess the requisite knowledge and skills to carry out their work safely, efficiently and correctly. To be effective, orientations should provide the employee with comprehensive information on the inherent risks specific to his work and work areas, and on the procedures and equipment necessary to properly discharge his normal employment and emergency response duties.

All new personnel should receive a formal Orientation from a supervisor during their first tour of duty offshore on the assigned installation. The orientation should include, at a minimum, the following information:

- the installation's policies relating to health, safety and environmental protection;
- the procedures, general work rules and inherent hazards associated with the assigned role;
- the procedures to be followed in the event of an accident or emergency involving their assigned work area(s);
- the location, use and care of the personal protective equipment that may be required while performing normal and emergency response duties; and
- the location and use of any emergency equipment available in or near the assigned work area(s) that may be required in the event of an accidental or emergency situation.

3.1.2 Helicopter/Vessel Safety Briefing

The Helicopter/Vessel Safety Briefing/Video should be designed to provide individuals travelling to and from offshore with an awareness of the dangers and risks associated with helicopter/vessel transportation, and the procedures to be followed in the event of an emergency during transport.

All persons shall receive a Helicopter/Vessel Safety Briefing/Video prior to being given transport to or from an offshore installation. The briefing must be repeated for each trip and should include, at a minimum, the following information:

- helicopter/vessel awareness;
- demonstration and donning of the helicopter transportation/marine abandonment suit;
- cautionary measures when embarking, disembarking and while en route;
- the role of passengers during emergencies;
- the location and use of emergency exits and equipment (including compressed air Helicopter Underwater Emergency Breathing Apparatus (HUEBA)); and
- escape/abandonment procedures.

3.1.3 Installation Safety Induction

The Installation Safety Induction should be designed to familiarize every person at the installation, including visitors, with respect to the hazards associated with an offshore environment, the location and use of safety equipment, and the procedures to be followed in the event of emergency.

An Installation Safety Induction should be conducted immediately upon arrival at the installation for:

- all persons arriving at the installation for the first time, and
- all persons returning to the installation after an absence of six months or more.

The Installation Safety Induction should include, at a minimum, the following information:

- general organizational and command structure for the installation;
- hazards and potential emergencies;
- the responsibility of individuals for their own safety and the safety of others;
- the need, and to whom, to report incidents;
- the location, if any, of designated smoking areas;
- the location and significance of hazardous areas;
- overview of the permit to work system
- the installation's emergency alarms, signals and actions;
- the location of muster stations, lifeboats, emergency exits and escape routes;
- the type, location and operation of the safety and lifesaving equipment available on the installation;
- the type and scheduling of onboard emergency drills and the need to participate in them; and
- demonstration of marine abandonment suits.

3.1.4 Rescue Coordination Center (RCC) Briefing and Protocol

All offshore and onshore management personnel, who are responsible for making major decisions in an emergency and all personnel who are responsible for communication with the JRCC in an emergency must obtain a briefing from JRCC staff to the satisfaction of the JRCC. These personnel must also be provided and be familiar with the most recent edition of the RCC publication “*Offshore Installation Notification Protocol and Search and Rescue Procedures*”.

3.2 Emergency Action Plans

To ensure a prompt and effective response to an emergency or crisis situation, operators must develop, in respect of their offshore operations, a comprehensive emergency action plan that provides clear and concise guidance for actions to be taken under emergency scenarios that could reasonably be expected to occur. These must include, at a minimum, the following:

- serious injuries or fatalities;
- explosions or major fire;
- loss of, or damage to, a helicopter, fixed wing aircraft or support vessel;
- loss of, or damage to, the installation;
- hazards unique to the operating area (e.g. heavy weather, sea ice, icebergs, collision or potential collision with an ocean going vessel);
- spills of oil or other pollutants;
- loss of well control, including relief well drilling arrangements;
- loss of ballast control or stability; and
- criminal activity, or threats to commit, criminal activity.

The action plan should include an organization chart depicting key operator and principal contractor personnel who have an assigned responsibility for the management of emergencies.

Where more than one operator is active in an area, they are encouraged to put in place mechanisms to facilitate the rapid exchange of information and, if necessary, to share resources such as vessels and aircraft in order to prevent or respond to alert and emergency situations.

3.3 Emergency Response Teams

It is essential that offshore facilities are staffed with designated emergency response teams capable of providing specialized on-site expertise and manpower that will assist in bringing an emergency to an early and successful conclusion. Each team should consist of specially trained and qualified personnel whose normal employment duties are such that they may be dedicated to respond to an emergency without being removed from other duties critical for the safe operation of the well, installation or vessel.

It is equally important that emergency team members and equipment be maintained in a state of operational readiness. This is generally accomplished through a combination of initial and refresher training and participation in onboard emergency drills and exercises.

Operators should consider the following when establishing minimum requirements for emergency response teams:

3.3.1 Fast Rescue Boat (FRB) Teams

Role

To provide standby vessel-based search, rescue and revival operations in response to man overboard situations.

Composition

Standby vessels are required to have on board, at all times, at least three designated crew members, excluding the master, in possession of a valid certificate in Fast Rescue Boat. In addition, three other crew members must be available to assist survivors in the rescue zone while the vessel's senior first aid person and one other crew member must be assigned solely to the care of survivors.

3.3.2 Fire Teams

Role

To provide coordinated fire fighting support to all areas of the installation. Team members may also be required to perform search, rescue and revival activities.

Composition

Offshore installations are required to have on board, at all times, at least ten (two teams of five) designated personnel in possession of a valid Certificate in Offshore Fire Team. Each team must be under the direction of a designated team leader having at least three (3) years of prior shipboard experience, or an equivalent combination of experience and training

3.3.3 First Aid Teams

Role

To provide support to the Medic in the application of basic and advanced first aid techniques, and in casualty management and handling.

Composition

The size and organization of the team may be determined by the Medic but, at no time, may be less than five (5) members, including the Medic as the designated team leader. At least one team member, other than the Medic, must be currently certified as a level two first aid attendant, while the remaining team members must be certified as level one first aid attendants.

3.3.4 Helideck Teams

Role

To provide operational support to all helicopter operations on the installation, including passenger movement, cargo handling and refueling. Team members may also be required to perform fire fighting and rescue duties.

Composition

Offshore installations are required to have on board, at all times, at least six (two teams of three) designated personnel. Each team must be under the direction of a certified Helicopter Landing Officer (HLO) who, along with at least two other team members, has completed training in Offshore Fire Team. Each team member must also receive instruction from a person knowledgeable of the equipment and procedures specific to the type of aircraft to be used on the installation.

3.3.5 MedEvac Teams

Role

To provide medical evacuation (MedEvac) services for offshore petroleum industry activities.

Composition

Operators must have MedEvac support personnel available to their offshore petroleum activities at all times. MedEvac Teams consist of medical personnel travelling offshore for the purpose of a MedEvac and composition may vary depending upon the medical situation. All members of the MedEvac Team or on-call medical personnel intending to participate in a MedEvac for an offshore petroleum activity, must have the following minimum training:

Each individual of the MedEvac Team intending an over-night stay on an offshore installation must have:

- Basic survival training – i.e. a valid BST, BST-R or OSI certificate or equivalent (refer to Chapter 2)

For on-call MedEvac personnel with no intended over-night stay offshore

- HUET and HUEBA training and SAR Helicopter familiarization; or
- MedEvac team training

3.3.6 Rescue Boat Teams

Role

To provide installation-based search, rescue and revival operational in response to man overboard situations.

Composition

Offshore installations equipped with a rescue boats are required to have on board, at all times, at least six (two teams of three) designated personnel in possession of a valid certificate in Rescue Boat Team. Each team must be under the direction of a designated team leader having at least one (1) year of prior shipboard experience, or an equivalent combination of experience and training.

3.3.7 Survival Craft Teams

Role

To take charge of the installation's evacuation stations, and the mustering and accounting for persons assigned to those stations. During emergencies, team members also have charge of lowering and launching the installation's survival crafts, and are in command of the crafts while at sea.

Composition

Offshore installations are required to have on board, at all times, at least two designated coxswains in possession of a valid certificate in Survival Craft Coxswain for each lifeboat whose combined capacities are capable of evacuating the installation's total complement.

3.3.8 Technical Response Teams

Role

To provide technical and operational support during incidents involving a kick or well control situation, a loss of stability or ballast control, or a potential collision with a vessel or ice.

Composition

The appropriate senior drilling or marine person and the operating supervisor and crew normally assigned to the area where the emergency has occurred. Additional on-site technical support may be obtained from within other departments, the client's representatives or third party contractor personnel.

3.4 Emergency Drills and Exercises

Many alert and emergency events can, depending upon their severity, lead ultimately to the disablement or abandonment of the installation or vessel. It is, therefore, essential that the offshore work force, as well as onshore support personnel and agencies, be well-practiced in reacting to each of the events, and that these events form the basis for developing hypothetical emergency drill and exercise scenarios. Emergency drills and exercises based on realistic scenarios offer an effective means of validating the readiness of emergency action plans, equipment and personnel. They test the way notifications of emergencies and instructions are communicated, the simulated use of equipment and emergency teams, and the effectiveness of the chain of command.

3.4.1 Emergency Exercises

Offshore installations rely on shore-based support during a response to a major emergency. It is, therefore, essential that operators periodically test their overall state of preparedness, including the communications and relationships between the installation, its standby vessel(s), and onshore emergency support teams.

Exercises should involve all appropriate offshore personnel and onshore support teams, and any outside agency that may become involved in the response to a major emergency offshore.

To maximize the benefits of emergency exercises, considerable coordination and planning is required. Operators should consider the following protocol when developing and conducting an exercise:

- A scenario should be developed to define the problem and the parameters within which the exercise should be conducted.
- The scenario details should be sufficient to allow for a realistic exercise but not so prescriptive as to prevent variations and an injection of the unexpected.
- All affected key personnel should be fully briefed as to their role within the scenario.
- Exercises should be carried out at a time which minimizes disruption to operations without detriment to the exercise objectives.
- In order to avoid confusion, consideration should be given to announcing all exercises in advance.
- Adequate observation should be maintained to monitor both the offshore and onshore elements of the exercise, and provide objective assessment and feedback.
- Full account should be taken of the prevailing operational and environmental conditions in order to safeguard the safety of personnel.
- A debrief session should be convened with appropriate personnel to discuss lessons learned as a result of the exercise.

- A summary report that includes deficiencies noted and corrective action taken should be prepared.
- The installation's/vessel's exercise should be officially recorded.

3.4.2 Emergency Drills

Emergency drills serve as an important means of establishing and practicing a routine. They provide personnel with practical training on specific emergency equipment, means of access and procedures pertinent to their role in an emergency.

Because of the wide variety of emergency equipment used in the offshore industry, it is impracticable to provide detailed guidance on the content of drills. However, each operator should establish minimum requirements regarding the type, frequency and objectives of emergency drills that will ensure the continued proficiency of personnel in the use of emergency equipment and procedures, and the maintenance of emergency equipment in a state of operational readiness. Drills should be conducted so as to ensure all personnel are aware of their emergency stations and are capable of efficiently performing the emergency duties assigned to them.

The following is provided for the guidance of operators in developing minimum requirements for conducting emergency drills:

Muster/Abandonment Drills

Purpose

To ensure all personnel on the installation are familiar with:

- the location of, and routes to, muster and evacuation stations;
- the audio and visual signals which summon personnel to these stations; and
- the method(s) of accounting for personnel at these stations.
- familiarization with procedure for loading of lifeboats during drills.

Frequency

Muster – weekly

Abandonment- quarterly

Participation

All personnel on the installation. In exceptional circumstances, some personnel assigned to critical operational duties may be exempt.

Fire Drills

Purpose

To ensure designated personnel on the installation are:

- aware of the location(s) to assemble before proceeding to the scene of a fire;
- familiar with the audio and visual signals which summon them to these assembly point(s);
- familiar with the routes to the locations where portable fire fighting equipment, including protective clothing, is stored;
- aware of the areas covered by fixed fire fighting systems;
- efficient in the use of fire containment and extinguishing equipment;
- able to correctly don and operate a self-contained breathing apparatus (SCBA) or breathing air system; and
- well-practiced in proper entry, search and rescue techniques.

Frequency

Weekly

Participation

All members of the installation's designated fire teams, and any other person who has a responsibility for fire fighting as part of their emergency duties assignment.

Weekly fire team training will be considered as equivalent to a fire drill.

Well Control Drills

Purpose

To ensure designated personnel on the installation are:

- able to recognize a kick and sound the alarm;
- able to record and calculate correct well control information for posting on the drill floor;
- able to apply correct well control procedures when on bottom, while tripping drill pipe, when drill collars are in the BOP, and when out of the hole;
- where applicable, familiar with the special problems and inherent hazards associated with HP/HT wells;
- able to correctly don and use a self-contained breathing apparatus (SCBA) or breathing air system ; and
- able to correctly enter the results of well control drills in the IADC report.

Frequency

Weekly

Participation

Senior drilling personnel and all members of the drill crew who have a designated role during a well control operation.

Ballast Control Drills

Purpose

To ensure designated personnel on the installation are:

- familiar with the use of primary and back-up communications between the main and secondary control stations and any other areas containing equipment critical for maintaining the stability, draught and trim of the installation;
- familiar with the equipment and procedures necessary for preserving the water tight integrity of the installation;
- competent in the remote and local operation of all valves and equipment associated with the operation of the installation's ballast system; and
- knowledgeable of the conditions and procedures for ballasting and de-ballasting the installation to its transit, storm and operating draughts.

Frequency

Weekly – semi-submersible installations

Quarterly – other types of floating installations

Participation

Senior marine personnel and any other person who has a designated responsibility for the operation of the installation's ballast system, or related equipment, under normal and adverse conditions.

Man Overboard/Fast Rescue Boat Drills

Purpose

To ensure designated personnel on the installation and standby vessel are:

- competent in the actions to be taken in the event of a man overboard situation;
- proficient in the launching, operation and recovery of the installation's/vessel's rescue boat, and the deployment of other available rescue equipment (e.g. life rings, scramble nets, EMPRA basket, etc.); and

- able to correctly retrieve casualties from the water and return them on the deck of the installation/vessel.

Frequency

Monthly – standby vessels

Participation

Senior marine personnel, members of the installation's/vessel's rescue boat teams, and any other person who has a responsibility for the recovery of casualties from the water as part of their emergency duties assignment. All other personnel should be involved on a random basis to ensure their competence in the actions necessary to initiate a man overboard response. On a semi-annual basis the drill should include the installation's crane and personnel lifting equipment.

First Aid Drills

Purpose

To ensure qualified personnel on the installation are able to:

- correctly apply the principles of safety oriented first aid; and
- provide assistance to the Medic in casualty management and handling, and in the preparation of casualties for evacuation.

Frequency

Monthly

Participation

The Medic and all designated members of the installation's first aid team.

Medical response team training meeting the criteria above will qualify as a first aid drill.

Anchor Quick Release Drills

Purpose

To ensure designated personnel on an anchored installation are:

- aware of the logic and process leading up to the emergency release of chains;
- familiar with the operation of release controls;
- well-practiced in the testing of the emergency pawl release system; and
- able to reset the pawls and confirm their correct positions.

Frequency

Monthly (only applicable to relevant MODU's)

Participation

Senior marine personnel and any other person who has a designated responsibility for assisting with the retrieval or release of anchors in a collision avoidance situation.

3.4.3 Recordkeeping

A debriefing should be held following each drill to address the following considerations:

- Was the drill conducted safely?
- Was the drill completed in a reasonable time period?
- Did all key personnel participate?
- Were all other personnel accounted for?
- Were personnel alert and did they respond with diligence?
- Did personnel know and follow established procedures?
- Were established procedures adequate?
- Was rescue/emergency equipment available and adequately maintained?
- Were communications adequate?
- Did the standby vessel react or respond as directed?

A record should be prepared for each drill describing the drill scenario and any recommendations for modifying the drill's procedure or improving its performance. A system should be established to ensure all recommendations are given proper consideration and appropriate actions taken. Figure 1, below, provides a sample *Emergency Drill Summary* record.

Figure 1 Sample Emergency Drill Summary Record

EMERGENCY DRILL SUMMARY

Rig Name	Well Name	Date	
Drill Leader	Position	Start Time	Finish

Type of Drill: Muster/Evacuation Fire Man Overboard/FRC Anchor
 Quick Release Well Control Ballast Control First Aid Other

Drill Scenario:

	Yes	No	N/A
1. Was the drill conducted safely?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Was the drill conducted in a reasonable time period?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Did all key personnel participate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were all other personnel accounted for?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were personnel alert and did they respond with diligence?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Did personnel know and follow established procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were established procedures adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Was rescue/emergency equipment available and adequately maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Were communications adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Did the standby vessel react or respond as directed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments/Recommendations:

Completed by:	Position:	Date:
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3.5 Emergency Team Training

Helicopter Landing Officer (HLO)
Offshore Fire Team (OFT)
Offshore Fire Team – Recurrent (OFT-R)
Rescue Boats
Survival Craft Coxswain

3.5.1 Helicopter Landing Officer (HLO)

Course Objectives

To provide designated personnel with the knowledge and skills necessary to safely and efficiently coordinate offshore helicopter operations.

Applies To

All designated Helicopter Landing Officers (HLOs) on an offshore installation

Course Duration

One (1) day

Prerequisites

- A valid Basic Survival Training (BST) Certificate, or equivalent
- A valid Offshore Fire Team (OFT) Certificate, or equivalent
- At least six (6) months prior experience in helideck operations on an offshore installation.

Renewal

Three (3) years

Note: Re-certification may be obtained by either:

completing the course and receiving a new certificate valid for three (3) years, or prior to the expiration of the certificate, the OIM issuing a written document, valid for three (3) years, attesting to the individual's continued proficiency in coordinating offshore helicopter operations. Proficiency must be validated by a record of activity.

Course Content

HLO responsibilities
Helicopter types and design
Helicopter operations, including the effects of weather
Helideck suitability and equipment
Communications network
Pre-landing considerations and preparation
Landing and departure routines

Helicopter start-up and shut-down
Special hazards and precautions
Carriage and marking of cargo, including dangerous goods
Fueling control and procedures

3.5.2 Offshore Fire Team (OFT)

Course Objectives

To provide designated personnel with an understanding of the chemistry and associated hazards of fire, and with practical skills and team training in fire suppression, rescue and personal protection.

Applies To

Members of the installation's fire teams and any other person who has a designated responsibility for firefighting as part of their emergency duties assignment.

Course Duration

Five (5) days

Prerequisites

- A Current Medical Certificate as per CAPP's East Coast Medical Assessment for Fitness to Work Offshore Guide or as required by the Training Institution
- A valid Basic Survival Training (BST).

Renewal

Three (3) years

Course Content

Chemistry of fire
Fire suppression equipment
Personal protection and rescue equipment
Self-contained breathing apparatus (SCBA)
Fire prevention and drills
Fire detection systems
Fire assessment
Fire fighting techniques
Fire scene search and rescue operations
Gas impinging fires
Machinery space fires
Helicopter fire fighting and rescue

3.5.3 Offshore Fire Team–Recurrent (OFT-R)

Course Objectives

To provide recurrent practical training in fire suppression, rescue and personal protection techniques and to update individuals with respect to changes or advancements in equipment technology and procedures since their previous training.

Applies To

Personnel who are required to hold a valid certificate in Offshore Fire Team (OFT), and who wish to maintain the validity of the certificate.

Note: Individuals who do not complete OFT-R prior to the expiration of their OFT Certificate are required to repeat the five (5) day course. However, because of the intermittent nature of employment and course scheduling, a grace period may be allowed by the energy authority upon written application by the operator.

Course Duration

Two (2) days

Prerequisites

- A Current Medical Certificate as per CAPP's East Coast Medical Assessment for Fitness to Work Offshore Guide or as required by the Training Institution
- A valid Offshore Fire Team (OFT) Certificate.

Renewal

Three (3) years

Course Content

Chemistry of fire
Fire suppression equipment
Personal protective equipment
Fire prevention
Types of fire fighting agents
Fire assessment
Firefighting techniques
Automatic fire detection and protection systems
Fire scene search and rescue
Helideck fire fighting techniques

3.5.4 Rescue Boats

Course Objectives

To provide designated individuals with hands-on training in the operation of rescue boats.

Applies To

Individuals who have been assigned to the installation's rescue boat team.

Course Duration

Fourteen hours

Prerequisites

- A Current Medical Certificate as per CAPP's East Coast Medical Assessment for Fitness to Work Offshore Guide or as required by the Training Institution.

Renewal

Three (3) years

Note: Re-certification may be obtained by either:

completing the course and receiving a new certificate valid for three (3) years, or prior to the expiration of the certificate, the OIM issuing a written document, valid for three (3) years, attesting to the individual's continued proficiency in the operation of the installation's rescue boat and the recovery and care of casualties. Proficiency must be validated by a record of activity.

Course Content

Crew selection and training
Rescue Boat
Rescue Boat Handling
Launch and Recovery
Casualty Handling

Note: For offshore petroleum installations outfitted with Fast Rescue Boats for rescue purposes, applicable training requirement is as detailed under section 7.2.2 Fast Rescue Boats.

3.5.5 Survival Craft Coxswain

Course Objectives

To provide designated personnel with theoretical and practical training that will enable them to take command of rigid and inflatable survival craft during abandonment.

Applies To

All designated survival craft coxswains on an offshore installation.

Course Duration

Minimum of four (4) days

Prerequisites

- A Current Medical Certificate as per CAPP's East Coast Medical Assessment for Fitness to Work Offshore Guide or as required by the Training Institution.
- A valid Basic Survival Training (BST) or MED B1 Certificate, or equivalent.

Renewal

Three (3) years

Course Content

Inflatable liferafts and lifeboats
Small team leadership and crowd control
Survival craft launching systems
Abandonment procedures
Handling of survival craft
Actions after abandonment
Signaling devices
Rescue procedures
Practical exercises and drills
Familiarization with handheld radios that may be available on the lifeboat

4 Technical Training

This chapter outlines specialized technical training specific to areas of technical responsibility and is intended to ensure personnel assigned responsibility for the integrity and safe operation of the well and the installation are properly trained and competent in their area of responsibility.

The following technical training is outlined in this chapter:

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4.1 Advanced First Aid

Course Objectives

To provide designated personnel with intensive training in the application of advanced first aid techniques.

Applies To

Two (2) crew members plus one (1) additional crew member for every ten (10) employees in excess of forty-one (41).

Note: The above numbers are applicable for any marine installation or structure employing more than forty (40) persons. For marine installations or structures employing less than forty (40) persons, the number of employees required to hold a valid certificate in advanced first aid shall be in accordance with the current edition of the Petroleum Occupational Safety and Health Regulations.

Course Duration

Five (5) days

Prerequisites

Cardiopulmonary Resuscitation (CPR) – Level C

Renewal

Three (3) years

Course Content

- Roles and responsibilities
- Attitude and professionalism
- Governing legislation
- Behavioral/ethical considerations
- Personal protection
- Primary and secondary surveys
- Oxygen administration
- Principles of triage
- Wounds, bleeding and shock
- Head, spinal and pelvic injuries
- Chest injuries
- Musculoskeletal injuries
- Burns and hypothermia
- Two-rescuer adult CPR (requires annual re-certification)
- Spinal immobilization

4.2 Atmospheric Gas Tester Training

Course Objectives

The course is designed for personnel who are required to verify that the health and safety of personnel is protected and maintained during work in areas where atmospheric hazards may exist.

The training is to include lectures, demonstration, class discussions and hands on practice. Upon completion of the training, personnel must demonstrate the prescribed practical skills to the satisfaction of the instructor and a written examination shall be successfully completed.

Equipment

The Instructor shall ensure that the following equipment is of an approved type, in good condition and is available for each course delivery in the ratios listed below:

- Electronic Gas Detector: at least one for instructor demonstration
- Sample Gas: sufficient gas for students to obtain a reading using the electronic gas detector

Applies To

Personnel who, as part of their role, are required to test the atmosphere of confined spaces and other vessels, equipment or worksites to verify it is safe for entry and for the safe execution of work.

***Note 1** – In addition to successful completion of this training, personnel **MUST** receive site specific instruction and be certified competent on the use of the gas detection equipment and procedures being used on the installation. This site specific training and competency assessment must be properly documented.

***Note 2** – Personnel who have had previous in-house or third party training which meets the curriculum requirements noted below and can demonstrate competency in accordance with an Operator's Competency Management System will not require this training.

***Note 3** – This course does not apply to personnel who are required to wear a gas detector for personal monitoring as part of an Operator's/Drilling Contractor/Vessel Owner Competency Management System and/or Control of Work System. Training and competency requirements for this "personal gas monitoring" will be provided through site/facility specific training.

Course Duration

Minimum of one day (excluding site specific training)

Renewal

Suitable and documented refresher training or competency review to be provided every three years.

Course Content

The course includes the following:

- Applicable regulations
- Physical properties of chemicals
- Gas laws
- Causes and nature of oxygen deficiency and how to test in oxygen deficient environments
- Gas detectors – instrument types and selection criteria
- Gas detectors – care and use
- Colorimetric Method (gas detector tubes) – principles of operation and performance characteristics
- Gas testing strategies and principles of atmospheric testing
- Control methods and mitigation

4.3 Banksman Training

Objectives

To ensure that designated personnel know the appropriate methods to be followed in directing and slinging loads onboard offshore installations. To ensure that personnel responsible for signaling and directing loads on offshore installations understand correct signaling procedures, the physical limitations of cranes, factors which affect the crane and crane operator's ability to respond. To ensure that designated personnel understand all the necessary safety factors, which must be considered prior to and during the movement of a load.

Applies To

Deck Supervisors, Crane Operators, Deck Operators, Roustabouts, and any other personnel who are involved in crane operations.

Course Duration

Minimum of one (1) day

Prerequisites

None

Renewal

Suitable and documented refresher training or competency review to be provided every four (4) years.

Course Content

Training course must include the following components in its objectives:

- Legislation, roles and responsibilities
- Safety and risk assessment
- Manual handling
- Proper use and handling of equipment
- Lifting, placing and disconnecting loads
- Identification and demonstration of hand and radio signals
- Risk assessments, lifting plans and controls

4.4 Basic First Aid

Course Objectives

To provide designated personnel with the knowledge and skills necessary to apply the basic principles of safety oriented first aid.

Applies To

Seventeen (17) crew members plus one (1) additional crew member for every two (2) employees in excess of forty-one (41). *Note: medics may be included in the numbers*

Note: The above numbers are applicable for any marine installation or structure employing more than forty (40) persons. For marine installations or structures employing less than forty (40) persons, the number of employees required to hold a valid certificate in basic first aid shall be in accordance with the current edition of the Petroleum Occupational Safety and Health Regulations. Alternate application of training requirements may be proposed based upon individual installation provided the intent of first aid training coverage is met.

Course Duration

Minimum of one (1) day

Prerequisites

None

Renewal

Three (3) years

Course Content

- Emergency scene management
- Shock, unconsciousness and fainting
- Adult artificial respiration
- Adult choking
- Severe bleeding
- Burns
- Head, spinal and pelvic injuries
- Chest, hand and eye injuries
- CPR
- Hypothermia, diagnosis and treatment

4.5 Cardiopulmonary Resuscitation (CPR) – Level C

Course Objectives

To provide designated personnel with the knowledge and skills necessary to recognize the signs of heart failure, perform artificial ventilation and circulation procedures, and manage conscious or unconscious victims.

Applies To

Those crew members who have been designated to hold Certificates in Advanced First Aid.

Course Duration

Minimum of one (1) day

Prerequisites

None

Renewal

One (1) year

Course Content

- Emergency scene management
- Circulatory and respiratory systems
- Shock, unconsciousness and fainting
- Adult artificial respiration
- Adult choking
- Cardiovascular emergencies and one-rescuer CPR
- Two-rescuer CPR
- Child and infant resuscitation (optional)
- Automatic external defibrillation

Note: CPR may be obtained either as a stand-alone course or as a component of a basic first aid program. However, based on the recommendation of the Canadian Heart and Stroke Foundation, certificates issued for the CPR component of a basic first aid program will be considered valid for a period of only one (1) year from its date of issue.

4.6 CCR Panel Assessment

Objectives

To ensure that designated individuals have been formally assessed against established criteria for their abilities to monitor and control production processes, emergency shutdown systems, fire and gas protection systems and other emergency systems as applicable to the control room to which they are assigned.

Applies To

Control Room Operators on production installations and to applicable supervisory and management personnel.

Course Duration

Not applicable

Prerequisites

On-the-job training and/or process simulator training as determined by the operator.

Renewal

Not applicable

Course Content

Non-applicable. This assessment may be completed as a separate exercise by a competent third party or by competent operator or installation owner personnel. In either case it must be formally documented.

4.7 Command & Control and Management of Major Emergencies

Course Objectives

To provide designated personnel with formal training in command and control and the management of major emergencies. Individuals who have completed this course should be able to maintain a state of readiness to deal with major emergencies onboard offshore installations. They should be able to review, manage and assess the information available in an emergency situation in a timely manner, establish priorities and take effective action. They should be able to implement predetermined emergency plans and procedures in the context of the current emergency. They should be able to efficiently communicate information and instructions. Persons who have successfully completed the course should be able to monitor and control resources, evaluate progress and communicate changes in plans and priorities. They should be able to effectively delegate authority, manage individuals and teams and deal with stress in themselves and others.

Applies To

Offshore Installation Managers and those designated to succeed Offshore Installation Managers in emergency situations. Other senior managers on offshore installations should also complete this course where appropriate to the organizational structure in question (e.g. Vessel Leads, Production Leads and Rig Superintendents).

Course Duration

A minimum of four (4) days

Prerequisites

Individuals must have at least 52 weeks of management and/or supervisory experience on an offshore installation prior to entering the course.

Renewal

Individuals who cannot demonstrate having participated in emergency drills and exercises, in a command role, on an offshore installation in the past two years must redo the course.

Course Content

The course must provide both theory (i.e. lectures, written material, presentations, videos, etc.) and practical exercises with the emphasis on practical exercises. Sufficient resources must be available to provide for the observation of students under realistic emergency conditions such that instructors can provide relevant and effective feedback. As indicated by the course title and objectives the course must focus on command and control and the management of major emergencies and not on technical details. The course must as a minimum cover the following topics:

- Maintenance of a state of readiness
- Situation assessment, prioritization and implementation of effective action
- Maintenance of communications
- Delegation of Authority
- Management of individuals and teams in emergencies
- Dealing with stress in oneself and in others

4.8 Confined Space Training

Course Objectives

To provide personnel who enter confined spaces with the knowledge necessary to identify and control hazards such that they may work safely in the space and be competent to deal with foreseeable emergency situations.

Applies To

All individuals who enter a storage tank, process vessel, ballast tank, or other enclosure not designed or intended for human occupancy, except for the purpose of performing work that has poor ventilation, in which there may be an oxygen deficient atmosphere, or in which there may be an airborne hazardous substance.

Course Duration

One day

Prerequisites

None

Renewal

Three years (or otherwise as dictated by regulations)

Course Content

- Applicable regulations
- Definition of confined spaces with identification of confined spaces and their hazards
- Hazard assessment
- Confined space work permit systems and standard procedures
- Familiarization with the operation of gas monitoring equipment
- Atmospheric testing
- Methods to safely ventilate and/or purge confined spaces
- Isolation requirements for substances, energy and equipment
- Duties of supervisors and entrants
- Confined space safety watch responsibilities
- Entrant tracking
- Overview of rescue and emergency response (including rescue plan)
- Emergency Escape Breathing Devices
- Identification and use of appropriate confined space PPE and rescue equipment (some specialized PPE such as SCBA/SABA requires specific additional training)
- Hot work and other hazardous activities

4.9 Fall Protection Training

Objectives

To ensure that designated personnel understand the proper selection, inspection, use and maintenance of fall protection equipment.

Applies To

All personnel who are required to use fall protection.

Course Duration

Minimum of four (4) hours

Prerequisites

None

Renewal

Every five years

Course Content

- Legislative requirements
- Fall protection theory
- Types of equipment and limitations of each type
- Identification of equipment using samples
- Practical applications of fall arrest and fall prevention systems
- Pre-use inspection of equipment using samples
- The correct fitting of harnesses using examples
- Ladder ascent and descent using permanent and temporary systems
- Proper care and use of fall arrest lanyards with deceleration shock absorbers
- The use of vertical and horizontal lifelines
- Care, maintenance, inspection and certification
- Introduction to rescue considerations

4.10 Hazardous Area Equipment Training

Objectives

To ensure designated personnel have a thorough understanding of the theory and principles used to protect electrical equipment in hazardous areas and in the design of electrical systems for use in hazardous areas. To provide designated individuals with an understanding of appropriate legislation, codes and standards. To provide designated personnel with hands on training in the installation, maintenance and inspection of electrical equipment in hazardous areas.

Applies To

Rig Electricians, Electronics Technicians, Electrical Technicians, Instrument Technicians, Telecommunications Technicians

Course Duration

Five (5) days

Prerequisites

None

Renewal

Non-applicable

Course Content

Theoretical training in:

- Principles of flammable materials
- Division area and IEC zone classification
- Equipment marking and selection
- Methods of explosion protection
- Intrinsic safety
- Equipment inspection and maintenance
- Maintenance of power circuits
- Maintenance of intrinsically safe circuits
- The difference between North America and International IEC standard with respect to workmanship (maintenance, inspection and installation)

Practical training in:

- Glanding
- Installation of power circuits

- Inspection of power circuits
- Installation of intrinsically safe circuits
- Inspection of intrinsically safe circuits
- Maintenance of power circuits
- Maintenance of intrinsically safe circuits
- The difference between North America and International IEC standard with respect to workmanship (maintenance, inspection and installation)

4.11 Incident Investigation Training

Objectives

To ensure that designated individuals can carry out effective and objective incident investigations including root cause analysis in accordance with recognized methodologies and protocols.

Applies To

The lead investigator for all incidents reportable to the energy authority is required to have this training. Appropriate training is recommended for all members of investigation teams including representatives of the Joint Occupational Health and Safety Committee.

Course Duration

Minimum of sixteen (16) hours

Prerequisites

None

Renewal

Renewal training is required if an individual has not participated in an investigation in the past three years.

Course Content

The course should focus on methods and techniques to gather objective evidence and establish the facts and sequence of events surrounding an incident such that causal factors, both immediate and root causes, may be determined and effective corrective action recommended to prevent reoccurrence. The course should include:

- Procedures for planning and conducting investigations
- Methodologies to analyze the data gathered during the investigations
- The development and evaluation of corrective measures
- The preparation of an investigation report, including corrective and preventative actions
- Accident/Incident causation theory
- Accident potential recognition
- Investigation techniques
- Sample investigations
- Sample accident reports
- Physical evidence gathering and photography
- Makeup of investigation teams
- 'Root Cause Analysis'

- Basic interviewing techniques and witness statements

4.12 Offshore Crane Operator Assessment

Objectives

To ensure that designated individuals have been formally assessed against established criteria for their abilities to safely operate the crane to which they are assigned.

Applies To

Crane Operators

Course Duration

Not applicable

Prerequisites

On-the-job training and/or simulator training as determined by the operator

Renewal

Not applicable

Course Content

The offshore crane operator assessment is required once every four years as per API RP 2D, current edition. This assessment may be completed by a competent third party or by competent operator or installation owner personnel. In either case it must be formally documented.

4.13 Offshore Well Control

Course Objectives

To provide appropriate personnel with an advanced knowledge of offshore well control equipment and techniques, and to provide practical hands-on training in proper well control procedures during simulated kick situations using a properly certified (IADC approved) rig floor simulator.

Applies To

All personnel on an installation who supervise drilling operations at or above the position of Assistant Driller, including Offshore Installation Managers on a drilling installation and shore-based personnel who may be responsible for the development and/or supervision of an offshore well control program must possess a valid IADC-WELLCAP, or IWCF Well Control Certificate at the level appropriate to the position. This means that Assistant Drillers and Drillers must be certified to at least the Fundamental (Driller) Level and that all others must be certified to the Supervisors Level.

In the case of operations involving a surface BOP stack (for example jack-up drilling units) valid Enform 2nd Line Supervisors Well Control Certificates are also acceptable.

Course Duration

Five (5) days

Prerequisites

None.

Renewal

Two (2) years

Note: In the event that a Well Control Certificate expires due to the unavailability of a local well control course, a grace period of up to 90 days may be permitted by the energy authority. This permission would be granted after the relevant Operator has approved the delay in retraining and submitted the standard exemption form as provided in Section 6, with specific reference to Section 3.2.1 of the Standard Practice.

Course Content

- Causes of Kicks
 - Kick Detection
 - Pressure Concepts and Calculations
 - Procedures
 - Constant Bottomhole Pressure Well Control Methods
 - Simulator Exercises

- Gas Characteristics and Behavior
 - Fluids
- Constant Bottomhole Pressure Well Control Methods
- Simulator Exercises
- Equipment
- Subsea Well Control (required for Subsea Endorsement)
- Simulator Exercises
- Government, Industry and Company Rules, Orders and Policies
 - Subsea Well Control (Required for Subsea Endorsement)
 - Special Situations
 - Simulator Exercises
- Written Exams
- Simulator Exams

4.14 Offshore Well Control; Completions and Interventions

Course Objectives

- To highlight the significant differences between well control in drilling operations and completion / intervention operations (i.e. where working with pressurized systems is only a possibility versus an absolute certainty).
- To provide supervisory personnel with an advanced knowledge of the safe operation of offshore well control equipment.
- To provide practical training in proper well control procedures for completion and well intervention operations on live wells using slickline, wireline and coiled tubing.
- To increase risk awareness and to present risk mitigation measures.

Applies To

- Personnel on an offshore installation who supervise well completion and intervention operations using slickline, wireline snubbing and / or coiled tubing equipment.
- Shore-based personnel who directly plan and manage these operations.

Note: The intention is to have one designated lead (i.e. Completions and Intervention Supervisor) and a total of at least three supervisory personnel, including preferably an operator's representative, an installation owner's representative and a service company representative, all with current certification – onsite during each completion or intervention operation.

Course Duration

Four (4) days (minimum)

Prerequisites

Renewal

Two (2) years

Course Content

- Live Well Intervention & Workover Well Control
- Kick Warning Signs and Complications
- Killing a Producing Well
- BOP Equipment
- Pressure versus Force Calculations
- Pressure Control Concepts
- Regulations
- Barrier Concepts
- Surface and Subsurface Equipment

- Completion, Workover & Packer Fluids)
- Gas Bubble Migration
- Constant Bottom-hole Pressure Methods
- Circulatory Well Control Pressure Methods
- Stripping and Snubbing
- Bullheading
- Coil Tubing
- Wireline Applications
- Lubricating Safely
- Grease Injection Systems
- Fishing Safely
- Hydrates
- Cold Temperature Considerations
- Equalizing Pressure Safely
- Pressure/Temperature/Compressibility Effects on Fluids/Gases
- Explosive Decompression and Stored Energy Hazards
- Light Pipe/Wire versus Heavy

Note:

- Service company supervisors should hold certificates appropriate to the equipment being operated. Certification in well intervention pressure control in either coiled tubing, or wireline, or snubbing is acceptable depending on the equipment that the person is operating. A combined operations certificate is recommended for persons who may be involved in multi-skill operations.

- For Operator's representatives, and for Installation Owners representatives, combined certification in completion and well intervention (coiled tubing, wireline and snubbing) would be appropriate

4.15 Oil Well Explosives Handling

Objectives

To ensure that personnel handling explosives related to perforating, completions, fracturing and other well-related activities are qualified to safely transport, store and handle these materials and to use them properly to safely achieve the intended result.

Applies To

This training applies to all personnel who directly supervise well-related operations requiring the use of explosives, e.g. contractor's wire-line and coiled tubing supervisors.

Note: personnel who handle explosives for other activities must be suitably trained and qualified pursuant to applicable legislation, appropriate codes and standards and company policy. Further, this document deals with formal training requirements and holders of a recognized certificate must also have offshore experience appropriate to the tasks being performed.

Course Duration

Two (2) days

Prerequisites

- Minimum 18 years of age;
- A minimum of six months hands-on experience in preparing and firing oil well explosive charges in the 36 months immediately preceding the application date; and,
- Physically capable of performing the duties of an oil well blaster.

Renewal

Five (5) years

Course Content

- Use of explosives in wire-line perforating and completions, TCP perforating, fracturing, pipe recovery and tool services
- Safe storage, transportation; handling and use of explosives both in the shop and at the well site
- Applicable legislation, codes and standards
- Characteristics of explosives used in oil well applications
- Function of oil well explosive accessories and tools
- Emergency response procedures
- Safe work practices for well site storage, handling, loading and firing of oil well explosives

4.16 Person in Charge Assessment

Assessment Objectives

To assess an individual's suitability for a command and control position and their ability to manage major emergencies on the type of offshore installation to which they have been assigned.

Applies To

Offshore Installation Managers and those designated to succeed Offshore Installation Manager in emergency situations. Other senior managers on offshore installations should also be assessed where appropriate to the organizational structure in question (e.g. Vessel Leads, Production Lead and Rig Superintendents).

Assessment Duration

This assessment may be completed as part of the Command & Control and Management of Major Emergencies course defined in this section of the document. If completed as a separate activity, a minimum of one day should be devoted to the assessment for each individual.

Prerequisites

Command & Control and Management of Major Emergencies

NOTE: marine officers who have completed Marine Emergency Duties parts C and D in accordance with TP 4957 or the equivalent training in accordance with the IMO's STCW convention will still have to be assessed in accordance with the requirements of Section 4.7 (Command & Control and Management of Major Emergencies) of this document

Renewal

Individuals who cannot demonstrate having participated in emergency drills and exercises, in a command role, on an offshore installation in the past two years or individuals who move to a command role on a different type on installation must be reassessed. Otherwise a reassessment must be completed every five (5) years.

Assessment Content

Assessments must be carried out by a team (a minimum of two) of assessors who have extensive relevant experience and formal training in conducting assessments. At least one member of the team must have experience in a command position on a similar type of offshore installation. The assessment must be completed against properly documented, previously determined, objective criteria. The assessment must focus on the individual's command and control ability and his ability to manage major emergencies not on technical details. Observation of the individual in realistic emergency scenarios must

form a significant part of each assessment. Interviews, written tests and other assessment methodology should also form part of the assessment. The assessment must include, as a minimum, the following topics:

- Ability to maintain a state of readiness
- Knowledge of contingency planning, emergency response procedures, drills and exercises
- Knowledge of and ability to utilize resources
- Ability to assess a situation, prioritize and implement effective action
- Ability to maintain effective communications in emergency situations
- Ability to effectively delegate authority
- Knowledge of human factors as applicable to emergency situations
- Ability to manage individuals and teams in emergencies
- Ability to deal with stress in oneself and in others

4.17 Rope Access Training

Course Objective

To ensure that designated personnel have been formally trained and assessed against established criteria for their abilities to demonstrate their understanding of proper selection, inspection, maintenance and operating techniques of rope access equipment in an offshore environment and meet the requirements of Industrial Rope Access Trade Association (IRATA), International Code of Practice and General Requirements.

Applies To

All personnel who are designed to conduct work utilizing rope access equipment and techniques.

Note: Three levels of competence have been identified, requirements noted below as 4.17.1 Level 1 Rope Access Technician; 4.17.2 Level 2 Rope Access Technician; and 4.17.3 Level 3 Rope Access Technician (Supervisor).

4.17.1 Level 1 Rope Access Technician

Course Duration

Minimum of four (4) days, plus 1 day independent IRATA assessment.

Prerequisites

As per IRATA

Renewal

Minimum of two (2) days training, plus 1 day independent IRATA assessment every three (3) years. Technicians not engaged in rope access work for six months or more should attend refresher training.

Expected Competencies

A level 1 Rope Access Technician is able to perform a limited range of rope access tasks under the supervision of an IRATA level 3 rope access technician.

Course Content

The course content must meet IRATA level 1 syllabus content, including, but not limited to:

- Theoretical Knowledge
- Equipment and Rigging
- Maneuvers
- Climbing

- Rescue/Hauling

4.17.2 Level 2 Rope Access Technician

Course Duration

Minimum of four (4) days, plus 1 day independent IRATA assessment.

Prerequisites

As per IRATA

Renewal

Minimum of two (2) days training, plus 1 day independent IRATA assessment every three (3) years. A level 2 technician undertaking re-assessment after expiry of the current assessment would require four (4) days of training instead of two (2) days. Technicians not engaged in rope access work for six months or more should attend refresher training.

Expected Competencies

A level 2 Rope Access Technician is capable of rigging work ropes, undertaking rescues and performing rope access tasks under the supervision of an IRATA level 3 supervisor.

Course Content

The course content must meet IRATA level 2 syllabus content, including, but not limited to:

- Theoretical Knowledge
- Equipment and Rigging
- Maneuvers
- Climbing
- Rescue/Hauling

4.17.3 Level 3 Rope Access Technician (Supervisor)

Course Duration

Minimum of four (4) days, plus 1 day independent IRATA assessment.

Prerequisites

As per IRATA

Renewal

Minimum of two (2) days training, plus 1 day independent IRATA assessment every three (3) years. A level 3 technician undertaking re-assessment after expiry of the current assessment would require four (4) days of training instead of two (2) days. Technicians not engaged in rope access work for six months or more should attend refresher training.

Expected Competencies

A level 3 Rope Access Technician is capable of site supervision for rope access work projects; is able to demonstrate the skills and knowledge required of levels 1, 2 and 3; is conversant with relevant work techniques and legislation; has a comprehensive knowledge of advanced rescue techniques; holds a current first aid certificate and has knowledge of the IRATA certification scheme.

Course Content

The course content must meet IRATA level 3 syllabus content, including, but not limited to:

- Theoretical Knowledge
- Equipment and Rigging
- Maneuvers
- Climbing
- Rescue/Hauling

4.18 Rigger Training

To ensure that designated personnel know the appropriate methods to be followed in rigging and lifting operations onboard offshore installations. To ensure that designated personnel have a basic understanding of the construction, inspection, maintenance and selection of lifting equipment, including any limitations and safety issues associated with the material. To ensure that designated personnel understand all the necessary safety factors, which must be considered prior to and during the movement of a load, including risk assessment, proper lift planning requirements and types of lifts.

Applies To

Any personnel conducting rigging and lifting operations or who supervise lifting operations. Examples of positions that may require this training include: Deck Supervisors, Crane Operators, Deck Operators, Roustabouts, Mechanics, Millwrights or other positions.

Course Duration

Minimum of two (2) days

Prerequisites

None

Renewal

Suitable and documented refresher training or competency review to be provided every four (4) years.

Course Content

As per section 2 and Appendix A or API RP 2D, current edition

4.19 Scaffolding Training

Objectives

To ensure that designated personnel have been formally trained and/or assessed against established criteria for their abilities to demonstrate their understanding of the proper selection, inspection, erection, alteration, dismantling and maintenance of scaffold structures and associated equipment in an offshore environment and meet the requirements of CSA-0150, Z797 “Code of Practice for Access Scaffolding” (latest edition).

Applies To

All personnel who are designated to work at scaffolding erection and dismantling.

Note: Two levels of Scaffolding Training have been identified, requirements for each are denoted below as 4.19.1 Competent Scaffold Erection and 4.19.2 Advanced Scaffold Erection.

4.19.1 Competent Scaffold Erection

Course Duration

Minimum of three (3) days

Prerequisites

None

Renewal

Completion of a course in competent scaffold erection every three years or every three years successful completion of an unbiased documented in-house or third party trade refresher or competency assessment meeting the CSA-0150, Z797 “Code of Practice for Access Scaffolding” (latest edition).

Expected Competencies

Person will have been trained in the requirements for scaffold erection and dismantling as outlined in CSA-0150, Z797 “Code of Practice for Access Scaffolding” (latest edition) and under competent supervision will be capable of erecting and dismantling for the general type of access scaffold systems being used in the offshore environment.

Course Content

The course outline should include but not be limited to:

- Applicable federal and provincial regulations, rules and guidelines

- Scaffold definitions and terminology
- Scaffold foundations and support
- Scaffold erection and bracing
- Scaffold stability and tie back systems
- Work platform types and duty ratings
- Allowable and applied loads
- Scaffold access types (ladders, stairs, etc.)
- Specific procedures for erection, use and dismantle on the type of scaffolding in question
- Inspection criteria, classification and communication of scaffold status, including tagging and corrective actions to be taken
- Nature of scaffold hazards, including electrical hazards, falling object hazards in the work area and correct procedures for dealing with those hazards
- Fall protection applications and their components, use and inspection and emergency plans
- Practical instruction and evaluation demonstrating skills learned through use and erection of scaffold components

4.19.2 Advanced Scaffold Erection

Course Duration

Minimum of three (3) days

Prerequisites

Three (3) years verifiable industrial scaffold experience or successful completion of a recognized scaffolding program with two years verifiable industrial scaffold experience.

Renewal

Every three (3) years individuals are to take part in an unbiased documented in-house or third party trade refresher course or competency assessment that meets the requirements set out in this section of the document.

Expected Competencies

In addition to competencies noted for Competent Scaffold Erection, the Advanced Scaffold Erector through a combination of training, experience and competency assessment is capable under competent supervision to work on specialized types of scaffolding required offshore such as hanging, cantilever, birdcage and special engineered designed scaffolding.

Course Content

The scaffolding provider shall verify competency of personnel through documented verification of training certification and trade experience as noted above.

Personnel shall pass a trade test which shall be administered by the competent scaffolding provider or competent third party. These assessments must be formally documented and should include the following:

- Erect tower scaffold
- Dismantle tower scaffold
- Erect independent scaffold
- Dismantle independent scaffold
- Erect birdcage scaffold
- Dismantle birdcage scaffold
- Erect hanging and cantilever scaffolds
- Dismantle hanging and cantilever scaffolds
- Demonstration of understanding of scaffold design criteria, maximum intended load capacity and intended use of scaffold and load carrying capacity
- Demonstration of scaffold inspection techniques and tagging systems

4.20 Stability and Ballast Control

Course Objectives

To provide designated personnel with an advanced knowledge of the principles of stability and the application of that knowledge to the day to day operation of a semi-submersible installation in both the intact and damaged condition with emphasis on the response of the installation to various loading and environmental forces.

Applies To

Offshore Installation Managers, Rig Captains, Barge Supervisors, Assistant Barge Supervisors, Ballast Control Operators, and any other individual who is assigned responsibility for the operation, or supervision of the operation, of the ballast system on a semi-submersible installation.

Course Duration

Minimum of nine (9) days

Prerequisites

A basic course in stability theory of at least five (5) days in duration, or a maritime education equivalent to an Ocean Navigator II (ON II).

Renewal

Three (3) years

Course Content

- Theory of moments as applied to stability
- Stable, neutral and unstable equilibrium
- Theory and effect of free surface on stability
- The inclining experiment
- Effects of adding, removing and shifting of weights
- Change of trim, change of draft, change of longitudinal center of buoyancy and center of gravity, tons per inch (TPI) and moments to trim one inch (MTI)
- Stability at large angles
- Use of hydrostatic curves, hydrostatic tables, deadweight scales and tank capacity tables
- Deck loads and its effect on stability
- Bilge and ballasting systems
- Damaged stability, damage control procedures, watertight compartments, counter flooding, use of pumps and secondary deballast systems
- Calculation of final draft after flooding of various compartments
- Environmental conditions and their effect on stability

- By-passing pumps for gravity flow
- Unsymmetrical ballasting and deballasting
- Stability curves
- Daily loading reports and operations manuals
- Mooring systems

Note: Course curriculum must include the use of a computer-based ballast control simulator capable of simulating the functions of a typical twin pontoon semi-submersible installation and the response of the installation to various loading and environmental forces in both the intact and damaged condition. The simulator shall be mounted on a tilting device or provided with a dedicated display, which gives a continuous pictorial representation of the attitude of the installation (i.e. combined heel and trim).

4.21 Stability and Ballast Control - Recurrent

Course Objectives

To provide designated personnel with recurrent training in the fundamentals of stability, and to ensure a controlled level of competence is maintained by those individuals who have an assigned responsibility for the operation, or supervision of the operation, of the ballast control system on a semi-submersible installation.

Applies To

Personnel who are required to hold a valid certificate in *Stability and Ballast Control*.

Course Duration

Minimum of four (4) days

Prerequisites

A course of at least five (5) days in duration in advanced stability concepts and ballast control operations involving a semi-submersible installation.

Renewal

Three (3) years

Course Content

Recurrent training in stability and ballast control must include a combination of classroom instruction and intensive training on a ballast control simulator to ensure continued competence in the operation of a ballast control system during routine and emergency situations.

4.22 Stability of Self-Elevating Units

Course Objectives

To provide designated personnel with a thorough understanding of the principles, calculations and practices of stability and marine operations unique to self-elevating installations in the floating and elevated modes.

Applies To

Offshore Installation Managers, Barge Supervisors and Assistant Barge Supervisors assigned to a self-elevating installation.

Course Duration

Minimum of four (4) days

Prerequisites

None

Renewal

Three (3) years

Course Content

- Definitions and general understanding of stability concepts
- Afloat versus elevated stability
- Location and control of the centre of gravity
- The inclining experiment
- Vessel's reaction under tow
- Free surface effect
- Damage control and stability
- Soil and site analysis
- Environmental forces
- Leg reactions

Note: Course curriculum must include the use of a computer-based simulator capable of simulating the response of a self-elevating installation to various loading and environmental forces while in the floating and elevated modes.

4.23 Stability of Self-Elevating Units - Recurrent

Course Objectives

To provide designated personnel with recurrent training that ensures a controlled level of knowledge and competence is maintained with respect to stability and marine operations unique to self-elevating installations in both the floating and elevated modes.

Applies To

Personnel who are required to hold a valid certificate in *Stability of Self-Elevating Units*.

Course Duration

Minimum of two (2) days

Prerequisites

Previous training of at least four (4) days in duration in stability and marine operations relating to self-elevating units.

Renewal

Five (5) years

Course Content

Course curriculum must include a review of basic and advanced stability theory as well as simulator training involving the following:

- Preloading analysis
- Elevating and lowering
- Field transit – afloat stability analysis
- Storm standby – elevated stability analysis
- Different types of punch-through
- Collision under tow
- Response to heavy weather under tow

4.24 Transportation of Dangerous Goods (TDG)

Course Objectives

To enable participants to apply the requirements set out in the International Air Transport Association (IATA) Dangerous Goods Regulations and the International Maritime Dangerous Goods (IMDG) Code respecting the transport of dangerous goods by air and sea.

Applies To

Any person having responsibility for the preparation and/or documentation of dangerous goods for shipment by air or sea.

Course Duration

IATA TDG – Air: Three (3) days

IMDG TDG – Marine: Two (2) days

Prerequisites

None

Renewal

IATA TDG – Air: Two (2) years

IMDG TDG – Marine: Three (3) years

Course Content

- Application of IATA Regulations, IMDG Code, and TDG Regulations and legal aspects
- Shipper, carrier and receiver responsibilities
- Identification of dangerous goods which are:
 - forbidden for air transport,
 - permitted as air or marine cargo under the Regulations/Code, or
 - exempt from the IATA Regulations, IMDG Code, and/or TDG Regulations in whole or in part
- IATA/IMDG/TDG classification of dangerous goods
- Application of information contained in the alphabetical/numerical list of dangerous goods
- General and specific packing requirements
- Marking and labeling a dangerous goods package
- Storage and segregation of dangerous and incompatible goods
- Completion of documentation

5 Drilling Installations – Personnel Qualifications and Training

Offshore drilling installations are required at all times to be under the overall command of an Offshore Installation Manager (OIM) who is knowledgeable in both the industrial and marine requirements necessary for the management and safe execution of an offshore drilling program. In addition, each installation must have a clear chain of command comprised of qualified managers and supervisors selected for their competence to direct the tasks necessary for a safe and efficient operation.

This section outlines the minimum qualifications, training and, where appropriate, marine and professional certification, required of operator and drilling contractor personnel assigned to drilling installations operating in Canada’s offshore areas.

For each position, the role description is provided along with details regarding service requirements. It is recognized that, due to variations in installation design and complexity, and the individual organization’s operating philosophy, style and crew member designations may differ from one installation to another.

The following positions are listed in this chapter:

5.1	Offshore Installation Manager	76
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5.5	Toolpusher.....	81
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5.1 Offshore Installation Manager

Alternate Titles: Person-in-Charge, MODU Master, Installation Manager

The Offshore Installation Manager (OIM) is the person in charge of the installation at all times. The OIM is responsible for the safety of onboard personnel, the integrity of the installation and the conduct of the operation in accordance with applicable regulations and policies.

The OIM should be designated by agreement between the operator and the owner of the installation. The person so designated must fulfill all the qualification and training requirements for the position, and have a letter of appointment issued by the operating company.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of an OIM. This would normally take 52 weeks on a drilling installation while holding a senior management position.

While acting in a senior management position, the candidate must have demonstrated a general knowledge of the equipment, personnel and operating practices associated with each offshore operation, and an ability to make sound decisions, particularly in stressful situations. The candidate must also be fully acquainted with the characteristics, capabilities and limitations of the installation, and have a thorough knowledge of the organization and actions to be taken in an emergency.

The candidate must have also completed a person in charge assessment and on-the-job training as deemed necessary by the employer.

MOU Certificates

A person fulfilling the duties of an Offshore Installation Manager shall hold,

- in the case of a floating installation, an Offshore Installation Manager, MOU/Surface Certificate as issued by Transport Canada, or
- in the case of a self-elevating installation, an Offshore Installation Manager, MOU/Self-Elevating Certificate as issued by Transport Canada.

Note: For non-Canadians an equivalent or acceptable level of training and certification will be considered by the energy authority in accordance with the procedure outlined in this document.

Mandatory Training

- Refer to Section 2 for all required safety training
- Command and Control/Management of Major Emergencies
- Person in Charge Assessment
- Stability and Ballast Control / Stability of Self-Elevating Units
- Offshore Well Control

5.2 Drilling Supervisor (Operator)

Alternate Titles: Company Man, Operator's Representative or Client's Representative

The Drilling Supervisor is the operator's senior on-site representative. The Drilling Supervisor is responsible for protecting the operator's interest in every respect, and for ensuring the operation is carried out in accordance with the approved drilling program, established operating policies and procedures, and legislative requirements applicable to the operating area.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Drilling Supervisor. This would normally take 5 years experience in offshore drilling operations on an installation fitted with similar equipment.

The candidate must have extensive knowledge of offshore drilling operations, including hole problems, borehole pressure dynamics, drilling and well control procedures and related equipment, and recent advancements in drilling technology.

The candidate must have a thorough understanding of company policy, emergency response procedures associated with the drilling program and regulatory matters applicable to the operating area.

The candidate must have also demonstrated superior leadership, management and organizational skills, and the ability to deal effectively with emergency situations.

Mandatory Training

- Refer to Section 2 for all required safety training
- Offshore Well Control

5.3 Drilling Engineer (Operator)

Alternate Titles: Company Engineer

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Drilling Engineer. This would normally take 52 weeks of drilling engineering experience involving an offshore drilling program.

The candidate must have a thorough knowledge of offshore drilling technology, including hole problems, geology, mud rheology, borehole pressure dynamics, well control procedures, and drilling equipment and operations.

The candidate must also be competent in all drilling related calculations required to safely execute the drilling program.

Mandatory Training

- Refer to Section 2 for all required safety training
- Offshore Well Control

5.4 Rig Superintendent

Alternate Titles: Senior Toolpusher, Rig Manager

The Rig Superintendent is the drilling contractor's or installation owner's senior on-site representative. The Rig Superintendent directs the work of the drilling crew and is responsible for the safe operation of the installation's drilling rig, subject only to the advice and direction received from the person in charge (OIM), if the individual does not also hold that designation, and from the operator's Drilling Supervisor under the terms of the drilling contract.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Rig Superintendent. This would normally take 52 weeks on an installation fitted with similar equipment while holding a supervisory or management position.

While acting in the position of Toolpusher, the candidate must have demonstrated superior safety and managerial skills, mechanical aptitude and technical capability.

The candidate must have a thorough knowledge of the policies, procedures and equipment in their areas of responsibility, including those relating to fire fighting, life saving and evacuation, and emergency response.

The candidate must also be knowledgeable of the client's operating policies and procedures, and have liaised with client representatives in matters relating to the drilling program.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Offshore Well Control

5.5 Toolpusher

Alternate Titles: Assistant Rig Superintendent, Nightpusher, Tourpusher and Assistant Rig Manager.

The Toolpusher oversees the work of the drilling crew and is responsible for ensuring that all aspects of the drilling operation are being carried out in a safe and efficient manner.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Toolpusher. This would normally take 52 weeks on an installation fitted with similar equipment while holding a supervisory or management position.

While acting in the position of Driller, the candidate must have demonstrated superior safety and supervisory skills, mechanical aptitude and technical capability.

The candidate must have a thorough knowledge of the policies, procedures and equipment in their areas of responsibility, including those relating to fire fighting, life saving and evacuation, and emergency response.

The candidate must also be knowledgeable of the client's operating policies and procedures and have liaised with client representatives in matters relating to the drilling program.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Offshore Well Control

5.6 Driller

The Driller supervises the work on the drill floor and is responsible for the operation of the rig floor equipment, the mud circulating system and blow out prevention/well control equipment. The Driller is directly responsible for overseeing the actions of the drill crew and is the first line of defense in the prevention of a well control incident.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Driller. This would normally take 52 weeks as an Assistant Driller on an installation fitted with similar equipment.

While acting in the position of Assistant Driller, the candidate must have demonstrated an ability to work independently under general supervision, exercise leadership and set a safe work example for subordinate personnel.

The candidate must have a thorough knowledge of the equipment, materials and procedures necessary to safely and efficiently construct a well, and an ability to recognize the signs and symptoms of an actual or potential downhole problem and react appropriately to minimize or prevent a major incident.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Offshore Well Control

5.7 Assistant Driller

The Assistant Driller assists the Driller in the supervision of drill floor operations and, from time to time, may relieve the Driller in the performance of his duties.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of an Assistant Driller. This would normally take 26 weeks of applicable experience on an installation fitted with similar equipment.

While acting in the position of Derrickman, or in a supervisory position, the candidate must have demonstrated an ability to work independently under general supervision, exercise leadership and set a safe work example for subordinate personnel.

The candidate must have a thorough knowledge of drill floor operations, including the operation of all pipe handling equipment and tools.

The candidate must also be competent in the performance of the functions of the Driller, and able to recognize the signs and symptoms of an actual or potential downhole problem and react appropriately to minimize or prevent a major incident.

The candidate must have also completed on-the-job training as deemed necessary by the employer. This training shall include the proper use and care of fall protection equipment.

Mandatory Training

- Refer to Section 2 for all required safety training
- Offshore Well Control

5.8 Derrickman

Alternate Titles: Derrickhand

The Derrickman is responsible for the operation, monitoring and maintenance of all drilling fluid systems and associated equipment. The Derrickman also works aloft in the derrick and/or at the rig floor piperacker console during the running and retrieval of drill string sections in and out of the well bore.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Derrickman. This would normally take 26 weeks as a Floorman on an installation fitted with similar equipment.

While acting in the position of Floorman, the candidate must have demonstrated mechanical aptitude, technical capability and an ability to work independently under general supervision.

The candidate must have a sound knowledge of the operation and routine maintenance of drilling fluid monitoring, circulating and conditioning equipment, and the equipment used to rack drill pipe in the derrick.

The candidate must be able to recognize the signs of drilling in an under balanced situation, and be competent in the performance of the emergency functions associated with the drilling fluid circulating and conditioning systems.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

The candidate must have knowledge of offshore well control equipment and techniques and have adequately demonstrated this, through on-the-job experience, reacting appropriately in a well control situation or simulated well control scenario.

Mandatory Training

- Refer to Section 2 for all required safety training
- Fall Protection Training

5.9 Floorman

Alternate Titles: Roughneck, Floorhand and Rotary Helper

The Floorman is responsible for the operation and routine maintenance of all drill string handling and hoisting equipment.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Floorman. This would normally take 26 weeks as a Roustabout on an installation fitted with similar equipment, or successful completion of a formal Floorman/Roughneck course at a recognized training institution.

The candidate must have a general understanding of drill floor operations, including the operation of all pipe handling equipment and tools.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

The candidate must have knowledge of offshore well control equipment and techniques and have adequately demonstrated this, through on-the-job experience, reacting appropriately in a well control situation or simulated well control scenario.

Mandatory Training

- Refer to Section 2 for all required safety training
- Fall Protection Training

5.10 Subsea Engineer

Alternate Titles: Subsea Supervisor

The Subsea Engineer is responsible for the assembly, maintenance, testing and repair of the subsea BOP stack and related well control equipment.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Subsea Engineer. This would normally take 26 weeks as a Subsea Engineer trainee on an installation fitted with similar equipment.

While acting in the position of Subsea Engineer Trainee, the candidate must have demonstrated mechanical aptitude, technical capability and an ability to work independently under general supervision.

The candidate must have a thorough knowledge of the operation of all subsea equipment and ancillary systems, including subsea-running tools, and be familiar with company and regulatory requirements for testing and maintaining subsea systems components.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Offshore Well Control

5.11 Barge Supervisor

Alternate Titles: Rig Captain, Barge Master, Barge Engineer, First Mate, Chief Mate, Stability Technician

The Barge Supervisor is in charge of, and responsible for, all marine aspects of the operation and marine safety management, subject only to the advice and direction he receives from the person in charge (OIM) if he does not also hold that designation. The Barge Engineer is responsible for the operation, maintenance and repair of marine equipment and ancillary systems.

Qualifications

The candidate must have adequately demonstrated to his employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Barge Supervisor. This would normally take 52 weeks as an Assistant Barge Supervisor or Ballast Control Operator on an installation fitted with similar equipment.

While acting in the position of Assistant Barge Supervisor, the candidate must have demonstrated mechanical aptitude and technical capability, as well as an ability to work independently, exercise leadership, and provide a safe work example for onboard personnel.

The candidate must have a general knowledge of all rig operations including those connected with drilling a well, and a thorough knowledge of company policies and procedures as well as the requirements of local regulatory bodies and legislation.

The candidate must also have a thorough understanding of the marine systems and operations associated with offshore installations, and have completed an onboard familiarization training period to gain knowledge of the stability criteria and ballast system specific to the type of installation to which he is assigned. This installation-specific training must be properly recorded and the installation owner must sign a document attesting to the competence of each Barge Supervisor in the operation of the installation's ballast system.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

MOU Certificates

A person fulfilling the duties of a Barge Supervisor shall hold,

- in the case of a floating installation, a Barge Supervisor, MOU/Surface Certificate as issued by Transport Canada, or
- in the case of a self-elevating installation, a Barge Supervisor, MOU/Self-Elevating Certificate as issued by Transport Canada.

Note: For non-Canadians an equivalent or acceptable level of training and certification will be considered by the energy authority in accordance with the procedure outlined in this document.

Mandatory Training

- Refer to Section 2 for all required safety training
- Stability and Ballast Control/Stability of Self-Elevating Units

5.12 Assistant Barge Supervisor

Alternate Titles: Assistant Barge Engineer, Watchkeeping Mate, Stability Technician, Watchstander

The Assistant Barge Supervisor provides assistance in all marine aspects of the operation and in the management of marine safety. In the case of a floating installation, the Assistant Barge Supervisor is responsible for ensuring that the position, stability and draught of the installation are maintained within prescribed limits. In some organizations, the Assistant Barge Supervisor may also fulfill the duties of a Ballast Control Operator.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of an Assistant Barge Supervisor. This would normally take 39 weeks of service as a deck rating, engine-room rating or assistant, or ballast control operator on an installation fitted with similar equipment.

The candidate must have a good understanding of the marine systems and operations associated with offshore installations, and have completed an onboard familiarization training period to gain knowledge of the stability criteria and ballast system specific to the type of installation to which he is assigned. This installation-specific training must be properly recorded and the senior marine person must sign a document attesting to the competence of each Assistant Barge Supervisor in the operation of the installation's ballast system.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Stability and Ballast Control / Stability of Self-Elevating Units

5.13 Ballast Control Operator

Alternate Titles: Control Room Operator, Watchstander

The Ballast Control Operator is responsible for the operation of the ballast system on a floating installation, and for maintaining, within prescribed limits, the stability, draught and trim of the installation.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Ballast Control Operator. This would normally take 12 weeks as a Ballast Control Operator Trainee doubled up on watch with an experienced Ballast Control Operator.

The candidate must have a good understanding of the marine systems and operations associated with offshore installations, and have completed an onboard familiarization training period to gain a knowledge of the stability criteria and ballast system specific to the type of installation to which he is assigned. This installation-specific training must be properly recorded and the senior marine person must sign a document attesting to the competence of each Ballast Control Operator in the operation of the installation's ballast system.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

MOU Certificates

A person fulfilling the duties of a Ballast Control Operator shall hold,

- In the case of a floating installation, a Ballast Control Operator Certificate as issued by Transport Canada.

Note: For non-Canadians an equivalent or acceptable level of training and certification will be considered by the energy authority in accordance with the procedure outlined in this document.

Mandatory Training

- Refer to Section 2 for all required safety training
- Stability and Ballast Control

5.14 Mud Logging Supervisor (Operator Subcontractor)

Alternate Titles: Senior Data Engineer

The Mud Logging Supervisor works under the direction of the Drilling Supervisor (Operator) and provides technical support to the Drilling Supervisor, the rig Drilling Crew and the company engineers and geologists. The Mud Logging Supervisor is responsible for the operation of the mud logging unit including the real time monitoring and recording of drilling fluid data and contents, drilling parameters and wellbore information.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Mud Logging Supervisor. This would normally take a minimum of 52 weeks of experience in offshore drilling operations.

The candidate must have a thorough knowledge of offshore drilling operations, including hole problems, geology, borehole pressure dynamics, well control procedures, and drilling equipment and operations.

The candidate must be able to effectively liaise with both drilling contractor personnel and company (Operator) personnel, and to have the ability to deal effectively with emergency situations.

Mandatory Training

- Refer to Section 2 for all required safety training
- Offshore Well Control

5.15 Maintenance Supervisor

Alternate Titles: Chief Engineer, First Engineer, Mechanical Supervisor, Maintenance Foreman, Senior Mechanic and Chief Mechanic

The Maintenance Supervisor is responsible for the operation, testing, inspection and maintenance of all mechanical and electrical equipment and machinery as specified by the owner of the installation.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Maintenance Supervisor. This would normally take 52 weeks on an installation fitted with similar equipment while holding an applicable supervisory position.

While acting in the position of Assistant Maintenance Supervisor, the candidate must have demonstrated an ability to work independently under general supervision, exercise leadership and provide a safe work example for subordinate personnel.

The candidate must have a thorough knowledge of the mechanical and electrical equipment associated with offshore installations, including the operation and maintenance of pumping and piping systems, associated control systems and, if appropriate, jacking systems.

The candidate must be able to demonstrate a thorough knowledge of the theory and practice associated with the installation and maintenance of electrical equipment in hazardous areas as defined by applicable legislation, codes and standards.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

MOU Certificates

A person fulfilling the duties of a Maintenance Supervisor shall hold,

- in the case of a floating installation, a Maintenance Supervisor, MOU/Surface Certificate as issued by Transport Canada, or
- in the case of a self-elevating installation, a Maintenance Supervisor, MOU/Self-Elevating Certificate as issued by Transport Canada.

Note: For non-Canadians an equivalent or acceptable level of training and certification will be considered by the energy authority in accordance with the procedure outlined in this document.

Mandatory Training

- Refer to Section 2 for all required safety training

5.16 Assistant Maintenance Supervisor

Alternate Titles: Second Engineer, Assistant Engineer, Senior Mechanic, Chief Mechanic, Watchkeeping Engineer

The Assistant Maintenance Supervisor provides support in the operation, testing, inspection and maintenance of the installation's mechanical and electrical systems.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of an Assistant Maintenance Supervisor. This would normally take 26 weeks as a Rig Mechanic on an installation fitted with similar equipment.

While acting in the position of Rig Mechanic, the candidate must have demonstrated mechanical aptitude, technical capability and an ability to work independently under general supervision.

The candidate must have a general knowledge of the mechanical and electrical equipment associated with offshore installations and be the holder of a Fourth-Class Engineer, Motor Ship Certificate.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training

5.17 Rig Mechanic

Alternate Titles: Mechanic, Watchkeeping Engineer

The Rig Mechanic is responsible for maintaining the operational integrity of all-mechanical systems and equipment on the installation.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Rig Mechanic. This would normally take 26 weeks as a motorman, engine-room rating or engine-room assistant on a motor ship or installation of not less than 225 kW propulsive power.

The candidate must have a thorough knowledge of the installation's mechanical systems, including drilling, deck and emergency equipment.

As well, the candidate must have successfully completed a course in practical skills for marine engineers or in diesel mechanics at a recognized training institution, or have an equivalent combination of experience and training.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training

5.18 Rig Electrician

Alternate Titles: Electrician

The Rig Electrician is responsible for maintaining the operational integrity of all-electrical systems and equipment on the installation.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Rig Electrician. This would normally take 26 weeks as an Electronics Technician on an installation fitted with similar equipment.

The candidate must have a thorough knowledge of the installation's electrical systems and equipment (including all electrical power generation sources, power distribution equipment, hazardous area electrical equipment, and refrigeration and air conditioning systems) and be able to perform diagnostic tests and troubleshoot system faults and failures down to the component level.

As well, the candidate must have successfully completed an appropriate course in industrial electrical technology at a recognized training institution, and apprenticeship experience and/or additional training to the equivalent of that required for a Canadian inter-provincial journeyman's certificate.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Hazardous Areas Equipment Training

5.19 Electronics Technician

The Electronics Technician assists the Rig Electrician in maintaining the operational integrity of the installation's electrical systems and equipment.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, ability to competently and safely perform the duties of an Electronics Technician. This would normally take 12 weeks on an installation or in a similar industrial setting performing electrical maintenance and repair work.

The candidate must have successfully completed a course in electrical technology at a recognized training institution followed by additional training and/or experience involving AC/DC drive systems, SCR's and PLC controls.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Hazardous Areas Equipment Training

5.20 Rig Welder

The Rig Welder is responsible for the repair, fabrication and modification of the installation's metal structures.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Rig Welder. This would normally take 52 weeks as a welder in an industrial setting performing similar work.

The candidate must have a thorough understanding of the applicable codes and regulations relating to the construction of metal structures, as well as company policies with respect to hot work and confined spaces. The candidate must have successfully completed welding certification training at a recognized training institution.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training

5.21 Crane Operator

Alternate Titles: Crane Driver, Roustabout Supervisor

The Crane Operator directs the work of the Roustabouts and is responsible for the operation and maintenance of the installation's pedestal-mounted revolving cranes.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Crane Operator. This would normally take 26 weeks as an assistant crane operator on an installation fitted with similar equipment.

While acting in the position of Assistant Crane Operator, the candidate must have demonstrated an ability to work independently under general supervision, exercise leadership and provide a safe work example for subordinate personnel.

The candidate must have a thorough knowledge of the operating and maintenance procedures necessary for the safe operation on the installation's cranes, and have successfully completed theoretical and practical training at a recognized training institution, or from a qualified instructor, in accordance with API RP 2D – *Recommended Practice for the Operation and Maintenance of Offshore Cranes*. www.api.org.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Crane Operator shall hold:

- Offshore Crane Operator Assessment

Mandatory Training

- Refer to Section 2 for all required safety training
- Rigger Training
- Banksman Training

5.22 Roustabout

The Roustabout is responsible for the safe and proper rigging and slinging of all loads lifted and moved by the installation's pedestal-mounted revolving cranes and other materials handling equipment.

The Roustabout may also be assigned to load and off load materials and supplies from helicopters and, in some organizations, may perform routine equipment maintenance and general upkeep of the installation.

Qualifications

This is an entry-level position.

The candidate must complete on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Rigger Training
- Banksman Training
- Fall Protection Training

5.23 Storekeeper

Alternate Titles: Storesman, Warehouseman, Materialsman

The Storekeeper is responsible for ordering equipment and parts as directed, and for maintaining adequate inventory and inventory control.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Storekeeper. This would normally take 26 weeks employed on a drilling installation or in a similar industrial setting.

The candidate must have a general understanding of the equipment and materials associated with offshore drilling operations, and be knowledgeable of the procedures and information necessary to complete shipping manifests, including documentation relating to the shipment of hazardous cargo by air and sea.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Transportation of Dangerous Goods (Air and Marine (IMDG)
- Transportation of Dangerous Goods (Air) IATA

5.24 Medic

The Medic is responsible primarily for providing routine minor health services and first aid.

Qualifications

The candidate must have demonstrated to the employer, through on-the-job training or a previous assignment, an ability to perform the duties of a Medic.

The candidate must have experience with medical evacuation of personnel by helicopter, fixed-wing aircraft or other support craft, and be the holder of an Advanced Cardiac Life Support Certificate, and a Basic Trauma Life Support or a Pre-hospital Trauma Life Support Certificate recognized by the Canadian Heart and Stroke Foundation.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Medic shall hold either:

- a license to practice medicine in Canada and have at least two years' clinical experience in intensive care or emergency practice, or
- a Registered Nursing Certificate issued by a provincial regulatory body and have at least two years' clinical experience in intensive care or emergency practice, or
- a Paramedic III (P3) Certificate issued by a college accredited by the Canadian Medical Association and have at least three years' experience as an advanced life support provider, or
- a VIB Canadian Military Medical Assistant Certificate.

Mandatory Training

- Refer to Section 2 for all required safety training

5.25 Radio Operator

The Radio Operator is responsible for marine, aeronautical and ship-to-shore communications. The Radio Operator monitors and communicates with vessels and aircraft in the drilling area, performs official Global Maritime Distress and Safety System (GMDSS) functions and executes critical emergency response tasks.

Qualifications

The candidate must have demonstrated to the employer, through on-the-job training or a previous assignment, an ability to perform the duties of a Radio Operator.

The candidate must have a general understanding of marine operations associated with offshore drilling installations and support craft, and be proficient in the use of the radio and satellite telecommunications equipment on the installation, including computer applications for helicopter flight and vessel tracking. Where duties include responsibility for keeping a radar watch, the individual must have completed appropriate training, and on mobile installations be under the supervision of someone with the requisite marine certification.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Radio Operator shall hold:

- General Operator's Certificate endorsed for Global Maritime Distress and Safety System (GMDSS) issued by Industry Canada
- a GMDSS Certificate from an accredited GMDSS training institution; and
- aviation and marine weather observer certification from a recognized training institution or qualified instructor

Mandatory Training

- Refer to Section 2 for all required safety training

5.26 Environmental Observer

Alternate Title: Ice/Weather Observer

The Environmental Observer is responsible for making, recording and reporting aviation and marine weather and oceanographic observations, and the provision of ice protection through the monitoring of the status and movement of all ice that may encroach the operating area.

NOTE: the qualifications/training and requirements may be assumed by another position as defined by the operator

Qualifications

The candidate must have demonstrated to the employer, through on-the-job training or a previous assignment, an ability to perform the duties of an Environmental Observer.

The candidate must have successfully completed approved training dealing with the procedures for making, recording and reporting weather and ice observations. As well, the candidate must be familiar with the operation of the installation's radar equipment and have a thorough knowledge of the operator's ice management procedures. Where duties include responsibility for keeping a radar watch, the individual must have completed appropriate training, and on mobile installations be under the supervision of someone with the requisite marine certification.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

The April 1994 *Guidelines Respecting Physical Environmental Programs During Petroleum Drilling and Production Activities on Frontier Lands* that were co-published by the NEB, C-NLOPB and CNSOPB (the "Boards") require persons taking meteorological observations on offshore drilling and production installations to be trained and/or certified with respect to the appropriate codes and procedures by the Atmospheric Environment Service (AES) of Environment Canada. However, it is noted that AES no longer provides this service and, until other recognized training institutions have been identified, the Boards will accept delivery of this training by any recognized training institution or qualified instructor.

Mandatory Training

- Refer to Section 2 for all required safety training

Note: On an installation with no Environmental Observer, a designated person must have the qualifications of an Environmental Observer in addition to their regular duties.

5.27 Chief Steward

Alternate Titles: Accommodations Coordinator

The Chief Steward is responsible for the accommodations and catering services on the installation.

Qualifications

The candidate must have demonstrated to the employer, through on-the-job training or a previous assignment, an ability to perform the duties of a Chief Steward.

The candidate must have experience with accommodations and catering management. The candidate should be familiar with safe food handling practices and the sanitation guidelines that are required for a food preparation and serving area. As well, the candidate should be knowledgeable in the various areas of accommodation management.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Chief Steward shall hold:

- Safe Food Handling Practices

Mandatory Training

- Refer to Section 2 for all required safety training

6 Production Installations - Personnel Qualifications and Training

Offshore production installations are required at all times to be under the overall command of an Offshore Installation Manager (OIM) who is knowledgeable in both the industrial and marine requirements necessary for the management and safe execution of an offshore production program. In addition, each production installation must have a clear chain of command comprised of qualified managers and supervisors selected for their competence to direct the tasks necessary for a safe and efficient operation.

This section outlines the minimum qualifications, training and, where appropriate, marine and professional certification, required of operator and drilling contractor personnel assigned to production installations operating in Canada's offshore areas.

For each position, the role description is provided along with details regarding service requirements. It is recognized that, due to variations in production installation design and complexity, and the individual organization's operating philosophy, style and crew member designations may differ from one production installation to another.

The following positions are listed in this chapter:

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6.1 Offshore Installation Manager

Alternate Titles: Person-in-Charge, Installation Manager

The Offshore Installation Manager (OIM) is the person in charge of the installation at all times. The OIM is responsible for the safety of onboard personnel, the integrity of the installation and the conduct of the operation in accordance with applicable regulations and policies.

The OIM is designated by agreement between the operator and the owner of the installation. The person so designated must fulfill all the qualification and training requirements for the position, and have a letter of appointment issued by the operating company.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of an OIM. This would normally take 52 weeks in a senior leadership position on a production installation.

The candidate must have an appropriate level of experience with drilling and well operations to be able to coordinate production operations with ongoing drilling, completion and work-over activity. On production installations, which include active drilling rigs, it is expected that an appropriately trained and qualified drilling management team, as specified in Chapter 5 of this document, will report to the installation manager.

The candidate must have also completed a person in charge assessment and on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Command and Control/Management of Major Emergencies
- Person in Charge Assessment
- Offshore Well Control or Equivalent (need only to be completed once but not subject to recertification training)
- Ballast Control/Stability (for semi-submersible Production Installations)

6.2 Vessel Lead

Alternate Titles: Captain

The Vessel Lead is responsible for all-marine activities and offshore services on the floating production installation and coordinates the logistics of cargo movements, helicopters, marine activities and other services while the floating production installation is connected to the mooring system. When disconnected from the mooring system, the Vessel Lead is in command of the floating production installation and is the overall person in charge of the vessel.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Vessel Lead.

While acting in a senior management position, the candidate must have demonstrated a general knowledge of the equipment, personnel and operating practices associated with operation of the vessel. The individual must have an ability to make sound decisions, particularly in stressful situations and should be able to demonstrate leadership capabilities to the crew.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Vessel Lead shall hold:

- Master Mariner Certificate
- Oil Tanker Endorsement Level 2
- Current General Operator's Certificate endorsed for Global Maritime Distress and Safety System (GMDSS) issued by Industry Canada: This certificate is subject to a five year renewal.

Mandatory Training

- Refer to Section 2 for all required safety training
- Marine Emergency Duties (MED) 2
- Command and Control/Management of Major Emergencies

6.3 Offshore Platform Lead

Alternate Titles: Satellite OIM, Satellite Lead, Intervention Lead

The Offshore Platform Lead is the person in charge of the Satellite Platform during interventions to normally unmanned platforms. The person is responsible for the safety of onboard personnel, the integrity of the installation and the conduct of the operation in accordance with applicable regulations and policies.

The Offshore Installation Manager located at the Central Platform designates the Offshore Platform Lead. The person so designated must fulfill all the qualification and training requirements for the position, and have a letter of appointment issued by the operating company.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of an Offshore Platform Lead. This would normally take 26 weeks in a leadership position on a production installation.

While acting in a leadership position, the candidate must have demonstrated a general knowledge of the equipment, personnel and operating practices associated with offshore operations and an ability to make sound decisions, particularly in stressful situations. The candidate must also be fully acquainted with the characteristics, capabilities and limitations of the installation, and have a thorough knowledge of the organization and actions to be taken in an emergency.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Command and Control/Management of Major Emergencies
- Offshore Well Control or Equivalent (need only to be completed once but not subject to recertification training)

6.4 Production Supervisor

Alternate Titles: Operations Lead, Production Lead

The Production Supervisor is the person in charge of Production Operations and is responsible for process reliability and availability on the installation.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Production Supervisor. This would normally take 52 weeks of applicable experience on a production installation.

While acting in a senior management position, the candidate must have demonstrated a general knowledge of the equipment, personnel and operating practices associated with producing operations and an ability to make sound decisions, particularly in stressful situations. The candidate must also be fully acquainted with the characteristics, capabilities and limitations of the operations equipment, and have a thorough knowledge of the organization and actions to be taken in an emergency.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Command and Control/Management of Major Emergencies

6.5 Vessel Coordinator

Alternate Titles: First Officer

The Vessel Coordinator is responsible for maintaining the night watch on the floating production installation, including the responsibility of all cargo, ballast and marine activities related to the floating production installation while it is connected to the mooring system. When disconnected from the mooring system, the Vessel Coordinator is the Senior Watchkeeping Officer and second in command to the Vessel Lead.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Vessel Coordinator.

The candidate must have demonstrated the ability to react effectively in emergency situations and should be able to take command of the vessel should the need arise.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Vessel Coordinator shall hold:

- Master Intermediate Voyage Certificate
- Oil Tanker Endorsement Level 2
- Current General Operator's Certificate endorsed for Global Maritime Distress and Safety System (GMDSS) issued by Industry Canada: This certificate is subject to a five year renewal.

Mandatory Training

- Refer to Section 2 for all required safety training
- Marine Emergency Duties (MED) 2
- Ballast Control/Stability (for Semi-submersible Production Installations)

6.6 Maintenance Supervisor

Alternate Titles: Maintenance Lead, Chief Engineer

The Maintenance Supervisor is responsible for the operation, testing, inspection and maintenance of all mechanical, electrical and instrumentation equipment related to producing operations on the installation.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Maintenance Supervisor. This would normally take 52 weeks of leadership/supervisory experience on a production installation.

The person should demonstrate an ability to work independently under general supervision, exercise leadership and provide a safe work example for subordinate personnel.

The candidate must have a thorough knowledge of the mechanical, electrical and instrumentation equipment associated with offshore installations, including the operation and maintenance of pumping and piping systems, associated control systems and, if appropriate, jacking systems. The candidate must be able to demonstrate a thorough knowledge of the theory and practice associated with the installation and maintenance of electrical equipment in hazardous areas as defined by applicable legislation, codes and standards.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Maintenance Supervisor shall hold:

- Appropriate University Degree or Technical Certificate

Mandatory Training

- Refer to Section 2 for all required safety training

6.7 Health, Safety and Environment (HS&E) Advisor

Alternate Titles: Safety, Health and Environment Lead, Offshore Environment, Health and Safety Advisor

The HS&E Advisor is responsible for providing health, safety and environment expertise to offshore management and the general workforce.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a HS&E Advisor.

The candidate must have demonstrated a thorough knowledge of regulatory requirements relating to the offshore work environment. The HS&E Advisor must provide health, safety and environment advice to the leadership and the workforce on areas such as emergency response, incident investigation, safe systems of work and management of risk. The HS&E Advisor will also facilitate visits from regulatory authorities and participate in audit procedures.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Recognized Auditor Training
- Incident Investigation Training

Note: Where an HS&E Advisor is not assigned to the installation, a designated person should have Incident Investigation Training.

6.8 Process Shift Lead

Alternate Titles: Production Coordinator

The Process Shift Lead is the focal point for coordination of operations shift activities on the installation and is responsible for safe and efficient production, control of work administration and planning.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Process Shift Lead.

The candidate must demonstrate an ability to work independently under general supervision, exercise leadership and provide a safe work example for subordinate personnel. The individual should have thorough knowledge of the process and utility systems on the installation and be able to prioritize planned and unplanned work. They should also demonstrate a thorough knowledge of all Central Control Room panels including the Distributed Control System and Fire and Gas panels.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training

6.9 Control Room Operator

Alternate Titles: Process Operator (CCR), Process Control Systems Operator

The Control Room Operator is responsible for safely and efficiently operating the installation's production equipment so that production is maximized.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Control Room Operator.

The candidate must also have a thorough knowledge of the installation's process and utilities systems. The candidate should also demonstrate a thorough knowledge of all Central Control Room panels including the Distributed Control System and Fire and Gas panels and be assessed against established criteria for their abilities to monitor and control production processes, emergency shutdown systems, fire and gas protection systems and other emergency systems as applicable to the control room to which they are assigned. This would normally be achieved through completion of on-the-job or process simulation training utilizing a model of the installation's systems.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- CCR Panel Assessment

6.10 Process Operator

Alternate Titles: Outside Process Operator, Process Operator (Utilities)

The Process Operator is responsible for safely and efficiently operating and maintaining the installation's production and utility systems.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Process Operator.

The candidate must also have a thorough knowledge of the installation's process and utilities systems and be able to provide maintenance support to various equipment when required.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training

6.11 Vessel Control System Operator

Alternate Titles: Second Mate

The Vessel Control Systems Operator is responsible for maintaining a safe and effective watch of vessel control systems in the central control room of the floating production installation while it is connected to the mooring system. When disconnected from the mooring system, the Vessel Control Systems Operator is responsible for maintaining a navigational bridge watch.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Vessel Control System Operator.

The candidate must have demonstrated the ability to effectively monitor the various control systems of the vessel. The individual should be familiar with the positioning and mooring systems of the vessel and be able to ensure that the vessel is in a stable position at all times.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Vessel Control System Operator shall hold:

- ON 2 Certificate issued by Transport Canada
- Oil Tanker Endorsement Level 2
- Current General Operator's Certificate endorsed for Global Maritime Distress and Safety System (GMDSS) issued by Industry Canada: This certificate is subject to a five year renewal.

Mandatory Training

- Refer to Section 2 for all required safety training
- Marine Emergency Duties (MED) 2
- Ballast Control/Stability (for Semi-submersible Production Installations)

6.12 Mechanical Technician

Alternate Titles: Rig Mechanic, Millwright, Mechanical Lead

The Mechanical Technician is responsible for maintaining the operational integrity of mechanical systems and equipment related to producing operations on the installation.

Qualifications

The candidate must have adequately demonstrated to the employer through on-the-job experience or a previous assignment, the ability to competently and safely perform the duties of a Mechanical Technician. This would require an appropriate Journeyman/Trade Certificate and demonstration of hours worked.

The candidate must also have a thorough knowledge of the installation's mechanical systems that relate to producing operations.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Mechanical Technician shall hold:

- Inter-Provincial Journeyman's Certificate (Mechanical/Millwright) or Diploma in Mechanical Engineering Technology

Mandatory Training

- Refer to Section 2 for all required safety training

6.13 Electrical Technician

Alternate Titles: Rig Electrician, Electrical Lead

The Electrical Technician is responsible for maintaining the operational integrity of electrical systems and equipment related to producing operations on the installation.

Qualifications

The candidate must have adequately demonstrated to the employer through on-the-job experience or a previous assignment, the ability to competently and safely perform the duties of an Electrical Technician. This would require an appropriate Journeyman/Trade Certificate and demonstration of hours worked.

The candidate must also have a thorough knowledge of the installation's electrical systems that relate to producing operations, including all electrical power generation sources, power distribution equipment, hazardous area electrical equipment, refrigeration, heating, ventilation and air conditioning systems. The candidate should be able to perform diagnostic tests and troubleshoot system faults and failures down to the component level.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Electrical Technician shall hold:

- Inter-Provincial Journeyman's Certificate (Electrical) or Diploma in Electrical Engineering Technology

Mandatory Training

- Refer to Section 2 for all required safety training
- Hazardous Areas Equipment Training

6.14 Instrument Technician

Alternate Titles: Instrument Lead

The Instrument Technician is responsible for maintaining the operational integrity of instrumentation systems and equipment related to producing operations on the installation.

Qualifications

The candidate must have adequately demonstrated to the employer through on-the-job experience or a previous assignment, the ability to competently and safely perform the duties of an Instrument Technician. This would require an appropriate Journeyman/Trade Certificate and demonstration of hours worked.

The candidate must also have a thorough knowledge of the installation's instrumentation systems and equipment.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Instrument Technician shall hold:

- Inter-Provincial Journeyman's Certificate (Instrumentation) or Diploma in Instrumentation Technology

Mandatory Training

- Refer to Section 2 for all required safety training
- Hazardous Areas Equipment Training

6.15 Telecoms Technician

The Telecoms Technician is responsible for maintaining the operational integrity of telephone and communication systems on the installation.

Qualifications

The candidate must have adequately demonstrated to the employer through on-the-job experience or a previous assignment, the ability to competently and safely perform the duties of a Telecoms Technician.

The candidate should also have a thorough knowledge of the installation's telephone and communication systems, including Public Address and Emergency Alarm systems, radio systems, telecom power and other marine/aeronautical methods of communication.

The candidate must have successfully completed an appropriate course in electronics technology at a recognized training institution.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Telecoms Technician shall hold:

- Electronics Trade Certificate or equivalent

Mandatory Training

- Refer to Section 2 for all required safety training
- Hazardous Areas Equipment Training

6.16 Deck Supervisor

Alternate Titles: Materials Movement Coordinator, Deck Foreman, Deck Coordinator

The Deck Supervisor is responsible for the safe and efficient movement of materials to and from the installation.

Qualifications

The candidate must have adequately demonstrated through on-the-job experience or a previous assignment, the ability to competently and safely perform the duties of a Deck Supervisor. This would normally take 52 weeks of experience on a production installation.

The Deck Supervisor ensures the proper coordination of the movement of all materials to and from an installation. The candidate must demonstrate the ability to work independently under general supervision, exercise leadership and provide a safe work example for subordinate personnel.

The Deck Supervisor must have a thorough knowledge of the operating and maintenance procedures necessary for the safe operation of the installation's cranes and other lifting equipment. The Deck Supervisor may also supervise maintenance activities including scaffolding, painting, rigging and insulating.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Transportation of Dangerous Goods (Road and Marine) (IMDG)
- Transportation of Dangerous Goods (Air) IATA
- Rigger Training
- Banksman Training

Note: On some installations, the Deck Supervisor could be the Crane Operator. In these cases, the Crane Operator should hold all training certifications required for a Deck Supervisor.

6.17 Crane Operator

The Crane Operator is responsible for the operation and maintenance of the installation's pedestal-mounted revolving cranes.

Qualifications

The candidate must have adequately demonstrated to the employer through on-the-job experience or a previous assignment, the ability to competently and safely perform the duties of a Crane Operator. This would normally take 26 weeks of experience on a production installation.

The candidate must demonstrate the ability to work independently and exercise leadership and direction to other personnel.

The candidate must have a thorough knowledge of the operating and maintenance procedures necessary for the safe operation of the installation's cranes and have successfully completed theoretical and practical training at a recognized training institution or from a qualified instructor, in accordance with API RP 2D – Recommended Practice for the Operation and Maintenance of Offshore Cranes. www.api.org.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Crane Operator shall hold:

- Offshore Crane Operator Assessment

Mandatory Training

- Refer to Section 2 for all required safety training
- Rigger Training
- Banksman Training

6.18 Deck Operator

Alternate Titles: Roustabout, Multi Skilled Deck Crew

Qualifications

The Deck Operator is responsible for the safe and proper rigging and slinging of all loads lifted and moved by the installation's pedestal mounted cranes and other materials handling equipment.

The Deck Operator may be assigned to load and off load materials and supplies from helicopters and work in conjunction with the Crane Operator to transfer cargo to and from supply vessels. In some organizations, the Deck Operator may perform routine equipment maintenance and general upkeep of the installation.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Rigger Training
- Banksman Training
- Fall Protection Training

6.19 Storeman

Alternate Titles: Material Controller, Storekeeper, Warehouseman, Materialsman

The Storeman is responsible for ordering materials and parts as directed and for maintaining adequate inventory and inventory control.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job training or a previous assignment, the ability to competently and safely perform the duties of a Storeman.

The candidate must have a general understanding of the equipment and materials associated with offshore operations and be knowledgeable of the procedures and information necessary to complete shipping manifests, including documentation relating to the shipment of hazardous cargo by air and sea.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Transportation of Dangerous Goods (Air and Marine) (IMDG)
- Transportation of Dangerous Goods (Air) IATA

6.20 Scaffolder

The Scaffolder is responsible for the assembly and disassembly of all scaffolds required for work on the installation. The Scaffolder is also responsible for the certification of scaffolds on a regular basis.

Qualifications

The candidate must have demonstrated to the employer, through on-the-job training or a previous assignment, an ability to perform the duties of a Scaffolder.

The candidate must have a thorough understanding of the applicable construction procedures and regulations relating to the erection of scaffolds. The candidate must also have successfully completed a scaffolding training program from a recognized training institution (refer to 4.19).

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Scaffolder shall hold:

- Scaffolding Certificate (refer to Section 4.19)

Mandatory Training

- Refer to Section 2 for all required safety training
- Fall Protection Training

6.21 Welder

The Welder is responsible for the repair, fabrication and modification of the installation structures.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Welder. This would normally consist of experience from an industrial setting in which similar work was performed.

The candidate must have a thorough understanding of the applicable codes and regulations relating to the construction of metal structures, as well as company policies with respect to hot work and confined spaces. The candidate must have successfully completed welding certification training at a recognized training institution.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Welder shall hold:

- Inter-Provincial Journeyman's Certificate (Welding)

Mandatory Training

- Refer to Section 2 for all required safety training

6.22 Platform Nurse

Alternate Titles: Rig Medic, Offshore Health Advisor

The Platform Nurse is primarily responsible for providing health services and first aid to employees of the installation.

Qualifications

The candidate must have demonstrated to his employer, through on-the-job training or a previous assignment, an ability to perform the duties of a Platform Nurse.

The candidate must have experience with medical evacuation of personnel by helicopter, fixed wing aircraft or other support craft and be experienced in advanced cardiac life support and trauma life support.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Platform Nurse shall hold either:

- a license to practice medicine in Canada and have at least two years' clinical experience in intensive care or emergency practice, or
- a registered Nursing Certificate issued by a provincial regulatory body and have at least two years' clinical experience in intensive care or emergency practice, or
- a Paramedic III (P3) Certificate issued by a college accredited by the Canadian Medical Association and have at least three years' experience as a advanced life support provider, or
- a VIB Canadian military Medical Assistant Certificate.

Mandatory Training

- Refer to Section 2 for all required safety training
- Advanced Cardiac Life Support Certificate
- Basic Trauma Life Support or Pre-hospital Trauma Life Support Certificate

6.23 Radio Operator

The Radio Operator is responsible for marine, aeronautical and ship-to-shore communications. The Radio Operator monitors and communicates with vessels and aircraft in the drilling area, performs official Global Maritime Distress and Safety System functions and executes critical emergency response tasks.

Qualifications

The candidate must have demonstrated to the employer, through on-the-job training or a previous assignment, an ability to perform the duties of a Radio Operator.

The candidate must have a general understanding of marine operations associated with offshore drilling installations and support craft, and be proficient in the use of the radio and satellite telecommunications equipment on the installation, including computer applications for helicopter flight and vessel tracking. Where duties include responsibility for keeping a radar watch, the individual must have completed appropriate training and on mobile installations be under the supervision of someone with the requisite marine certification.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

The April 1994 *Guidelines Respecting Physical Environmental Programs During Petroleum Drilling and Production Activities on Frontier Lands* that were co-published by the NEB, C-NLOPB and CNSOPB (the Boards) require persons taking meteorological observations on offshore drilling and production installations to be trained and/or certified with respect to the appropriate codes and procedures by the Atmospheric Environment Service (AES) of Environment Canada. However, it is noted that AES no longer provides this service and, until other recognized training institutions have been identified, the Boards will accept delivery of this training by any recognized training institution or qualified instructor:

- Current General Operator's Certificate endorsed for Global Maritime Distress and Safety System (GMDSS) issued by Industry Canada: This certificate is subject to a five year renewal.
- Basic Radar/Navigation Training.

Mandatory Training

- Refer to Section 2 for all required safety training

Note: On an installation with no Radio Operator, a designated person must have the qualifications of a Radio Operator in addition to their regular duties.

6.24 Environmental Observer

Alternate Titles: Ice/Weather Observer

The Ice/Weather Observer is responsible for making, recording and reporting aviation and marine weather and oceanographic observations, and the provision of ice protection through the monitoring of the status and movement of all ice in or approaching the operating area.

Qualifications

The candidate must have demonstrated to the employer, through on-the-job training or a previous assignment, an ability to perform the duties of an Ice/Weather Observer.

The candidate must have successfully completed approved training dealing with the procedures for making, recording and reporting weather and ice observations. As well, the candidate must be familiar with the operation of the installation's radar equipment and have a thorough knowledge of the operator's ice management procedures. Where duties include responsibility for keeping a radar watch, the individual must have completed appropriate training and on mobile installations be under the supervision of someone with the requisite marine certification.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

The April 1994 *Guidelines Respecting Physical Environmental Programs During Petroleum Drilling and Production Activities on Frontier Lands* that were co-published by the NEB, C-NLOPB and CNSOPB (the Boards) require persons taking meteorological observations on offshore drilling and production installations to be trained and/or certified with respect to the appropriate codes and procedures by the Atmospheric Environment Service (AES) of Environment Canada. However, it is noted that AES no longer provides this service and, until other recognized training institutions have been identified, the Boards will accept delivery of this training by any recognized training institution or qualified instructor.

Mandatory Training

- Refer to Section 2 for all required safety training

Note: On an installation with no Environmental Observer, a designated person must have the qualifications of an Environmental Observer in addition to their regular duties.

6.25 Chief Steward

Alternate Titles: Accommodations Coordinator

The Chief Steward is responsible for the accommodations and catering services on the installation.

Qualifications

The candidate must have demonstrated to the employer, through on-the-job training or a previous assignment, an ability to perform the duties of a Chief Steward.

The candidate must have experience with accommodations and catering management. The individual should be familiar with safe food handling practices and the sanitation guidelines that are required for a food preparation and serving area. As well, the candidate should be knowledgeable in the various areas of accommodation management.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Professional Certification

An individual employed in the position of Chief Steward shall hold:

- Safe Food Handling Practices

Mandatory Training

- Refer to Section 2 for all required safety training

6.26 Completions and Intervention Supervisor

The Completions and Intervention Supervisor is the focal point for coordination of completion and intervention operations in the post-drilling phase. The individual is responsible for the safe and efficient control of completions and intervention work, administration and planning.

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience or a previous assignment, an ability to competently and safely perform the duties of a Completions and Intervention Supervisor.

The candidate must demonstrate an ability to work independently under general supervision, exercise leadership and provide a safe work example for subordinate personnel. The candidate should have thorough knowledge of the completion and intervention systems on the installation and be able to prioritize planned and unplanned work. They should also demonstrate a thorough knowledge of planning and executing both standard and simultaneous operations where completions activities are undertaken in close proximity to drilling and work-over activities.

The candidate must have also completed on-the-job training as deemed necessary by the employer.

Mandatory Training

- Refer to Section 2 for all required safety training
- Offshore Well Control – Completions and Interventions

7 Standby and Supply / Support Vessel – Personnel Qualifications and Training

Offshore Standby and Supply / Support Vessels are federally regulated. Regulations for qualification and training of seafarers fall under Transport Canada, Marine Safety. The certification and training of seafarers falls under the Canada Shipping Act with particular focus on the Crewing Regulations and Marine Certification Regulations. Occupational Safety Training falls under the Canada Labour Code Part 2 and the Marine Occupational Safety and Health Regulations. Standby Vessel Safety Training falls under TP 7920 Standard Respecting Standby Vessels (1988).

Standby and Supply / Support Vessels are required at all times to be under the command of the Master (Captain) who is certified and knowledgeable in the safe operation of the vessel. In addition, each vessel must have a clear chain of command comprised of qualified and certified personnel. Each vessel is issued a Safe Manning Certificate stating the minimum manning and certification required for the safe operation of the vessel. Each Safety Standby Vessel is issued a Standby Letter of Compliance stating the minimum manning for safety standby operations.

This section outlines the minimum qualifications, safety training and, where appropriate, marine certification for Standby and Supply / Support Vessels while operating:

- (1) within 500 meters of a production or drilling installation, or
- (2) when in standby for a drilling or production installation, or
- (3) while active in ice management for the protection of an installation.

For each position, the role and reporting relationship is provided along with details regarding service requirements. It is recognized that due to variations in vessel design and complexity, individual organization's operating philosophy and style, crewmember designations and lines of authority may differ from one vessel operation to another.

The following position and safety training requirements are listed in this chapter:

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7.1 Deckhand

Alternate Titles: Seaman, General Purpose Crew

The deckhand's duties may include ,while working within the 500-meter zone of an offshore asset, , lashing and securing of back-loaded deck cargo, releasing securing mechanism and hookup of deck cargo being discharged, and, connect and disconnect hoses on loading and discharging bulk and/or liquid cargoes to the offshore asset.

During anchor handling operations, duties may include securing of wires, spooling on and off pennants, stowing chain in lockers, connecting/disconnecting anchors, chains, wire, shackles, etc., as required. Hook up tow wire when involved in towing operations.

During Safety Standby operations duties may include, but may not be limited to, coxswain of the Fast Rescue Boat (FRC), crewman/spotter of FRB, Operate FRB Davit for launch/recovery, prepare FRB for launch/recovery, operate crane for deployment of Empra Basket (if fitted), operate crane for deployment of Dacon Scoop (if fitted) and First Aid attendant.

During iceberg towing operations, duties may include preparing deck for deployment/recovery of iceberg towrope or net, as well as participation for the hookup or disconnection of the iceberg towrope or net

Qualifications

The candidate must have adequately demonstrated to the employer, through on-the-job experience, a recognized pre-sea training course, or a previous assignment, an ability to competently and safely perform the duties of a Deckhand.

Mandatory Technical Training

- Marine Emergency Duties A1
- Marine Emergency Duties B1
- Marine Emergency Duties B2
- Workplace Hazardous Materials Information System (WHMIS)
- Valid Seafarers Medical

Mandatory Certification

A vessel's Safe Manning Certificate identifies the number of Bridge Watch Certificates required. There will be a minimum number of deckhand positions requiring Bridge Watch Certification, however, this may not apply to all deckhand positions.

7.2 Standby and Supply / Support Vessel Personnel – Mandatory Safety Training

7.2.1 Cardiopulmonary Resuscitation (CPR) – Level C

Course Objectives

To provide the knowledge and skills necessary to recognize the signs of heart failure, perform artificial ventilation and circulation procedures and manage conscious or unconscious victims.

Applies To

Those crew members who have been designated to hold Certificates in Advanced First Aid.

Course Duration

Minimum of one (1) day

Prerequisites

None

Renewal

One (1) year

Course Content

- Emergency scene management
- Circulatory and respiratory systems
- Shock, unconsciousness and fainting
- Adult artificial respiration
- Adult choking
- Emergencies and one-rescuer CPR
- Two-rescuer CPR
- Child and infant resuscitation (optional)
- Automatic external defibrillation

Note: CPR may be obtained either as a stand-alone course or as a component of a basic first aid program. However, based on the recommendation of the Canadian Heart and Stroke Foundation, certificates issued for the CPR component of a basic first aid program will be considered valid for a period of only one (1) year from its date of issue. Also, a Level B Certificate is acceptable only if it includes two rescuer adult CPR.

7.2.2 Fast Rescue Boat (FRB)

Course Objectives

To provide designated crew members with the knowledge and skills that will enable them to respond effectively as a team to an offshore emergency involving the recovery of survivors from the water.

Applies To

At least three (3) standby vessel crew members, excluding the master.

Note: The Master must be exposed to such training to an extent required for his familiarization with the requirements for the safe and effective operation of the boat.

Course Duration

Four (4) days

Prerequisites

None

Renewal

Five (5) years

Note: Re-certification may be obtained by either:

- *completing the four (4) day course and receiving a new certificate valid for five (5) years;*
- *or prior to the expiration of the initial certificate, the Master issuing a written document, valid for five (5) years, attesting to the individual's continued proficiency in the operation of the vessel's rescue boat, and in the recovery and care of casualties. Proficiency must be validated by a record of activity. This training may also be provided by in-house trainers.*

Course Content

- The rescue boat
- Protective clothing and equipment
- General operation of the rescue boat
- Operational hazards and limitations
- Launch and recovery
- In-water familiarization
- Search patterns and equipment
- Casualty recovery and care
- Maintenance and repair

7.2.3 Marine Advanced First Aid

Alternate Titles: Mariners Level 2, Advanced Level 1 and Advanced Medical First Responder Level 1.

Course Objectives

To provide designated crew members with intensive training in the application of advanced first aid techniques as per TP 13008.

“Every seafarer who is designated to apply immediate advanced first aid in the event of an accident or illness on board must demonstrate competence to undertake the tasks, duties and responsibilities”.

Applies To

The standby vessel’s designated senior first aid person and at least two (2) other crew members, excluding the Master and Chief Engineer.

Course Duration

Five (5) days

Prerequisites

None

Renewal

Three (3) years

Note: Annual recertification of CPR/AED and O2 administration is recommended.

Course Content

- Immediate Action
- First-Aid Kit
- Body Structure and Function
- Toxicological Hazards Aboard Ship
- Examination of Patient
- Spinal Injuries
- Burns, Scalds and Effects of Heat and Cold
- Fractures, Dislocations and Muscular Injuries
- Medical Care of Rescued Persons, Including Distress
- Hypothermia and Cold Exposure
- Radio Medical Advice
- Pharmacology
- Sterilization

- Cardiac Arrest, Drowning and Asphyxia
- Psychological and Psychiatric Problems
- Assessment

7.2.4 Marine Basic First Aid

Course Objectives

To provide designated crew members with the knowledge and skills necessary to apply basic principles of safety orientated first aid as per TP 13008.

“Every seafarer who is designated to apply immediate basic first aid in the event of an accident or illness on board a vessel must demonstrate competence to undertake the tasks, duties and responsibilities”.

Applies To

Seventy-five per cent (75%) of the standby vessel complement as indicated on the vessel's *Letter of Compliance*.

Course Duration

Two days

Prerequisites

None

Renewal

Three (3) years

Note: Annual recertification of CPR/AED is recommended.

Course Content

- General Principles
- Body Structure and Functions
- Positioning of Casualty
- The Unconscious Casualty
- Resuscitation
- Bleeding
- Management of Shock
- Burns and Scalds, and Accidents Caused by Electricity
- Rescue and Transport of Casualty
- Other topics
- Assessment

7.2.5 Transportation of Dangerous Goods (TDG)

Course Objectives

To give participants a practical understanding of the regulations governing the transportation of dangerous goods, as set out in the *Canada Transportation of Dangerous Goods Act*.

Applies To

Deck Ratings

Note: Vessel Masters and Deck Officers are not subject to this requirement, as they are trained in the International Maritime Dangerous Goods (IMDG) Code, adopted by the International Maritime Organization, as part of their marine certification syllabus.

Course Duration

Minimum of four (4) hours

Renewal

Every three (3) years.

Course Content

- Structure and application Canadian Transportation of Dangerous Goods Act & Regulations and interrelation with the International Maritime Dangerous Goods (IMDG) Code
- Classification of Dangerous Goods and meaning of different labels
- Responsibilities of the shipper, carrier and consignee
- Requirements for documentation, identification and marking
- Stowage and segregation requirements
- Emergency response procedures

7.2.6 Workplace Hazardous Materials Information System (WHMIS)

Course Objectives

To provide personnel with relevant information with respect to the safe handling, use, storage and disposal of hazardous materials in the workplace.

Applies To

All crew members on a standby or supply / support vessel

Course Duration

Minimum of four (4) hours, or as required to achieve course objectives.

Prerequisites

None

Renewal

No expiry

Course Content

- WHMIS legislation
- Product classification
- Supplier, employer and employee responsibilities
- Supplier and workplace labels and variations
- Material Safety Data Sheets (MSDS)
- Safe storage, handling and disposal procedures
- Emergency procedures

8 Exemption and Equivalency Procedures

Exemption Procedure

Because of the intermittent nature of employment, course scheduling and other factors, it may not always be possible for an individual to fulfill all the qualification and training requirements set out in this document prior to traveling offshore. In such circumstances, an exemption may be granted on a case-by-case basis with the approval of the operator's senior onshore representative and the Offshore Installation Manager (OIM).

For each individual granted an exemption, a Training and Qualification Exemption Notification Form (next page) must be completed by the operator and distributed in accordance with Section 'E' of the Form. Where an exemption relates to survival training, the helicopter contractor, or vessel master where the individual is to be transported via standby vessel, must also be notified. The energy authority will monitor all exemptions and will notify the operator in question regarding any specific or general problem or concern. The energy authority reserves the right to deny any exemption or to issue an order to an operator relating to exemptions if the process is abused.

Equivalency Procedure

This Standard Practice document is written at a high level and allows for the acceptance of training and certification other than that listed as "recognized" (refer to the separate document entitled (Recognized Certificates published by the TQC), where that training provides for an equivalent level of competence. Determinations of equivalency are left to the discretion of the operator with oversight by the energy authority. When making such a determination operators must clearly document the basis for equivalency and the level of management which approved the equivalency. Operators must also notify the energy authority and appropriate personnel within their organizations who may have need to be aware of such information, e.g. the installation manager. Pursuant to the Committee's Terms of Reference all determinations of equivalency may be subject to review and audit by the energy authority and documentation supporting the determination must be available upon request. The energy authority reserves the right to deny any determination of equivalency or to issue an order to an operator relating to equivalency if the process is abused.

These provisions only apply to training and qualifications as listed in this document and do not apply to requirements prescribed by legislation or by agencies having authority outside that referred to in this document, e.g. Transport Canada's authority to require certification for specified marine and aviation positions. Where there are specific requirements prescribed in the "Accord Legislation" the requirements prescribed in the "Accord Legislation" the energy authorities have developed a "regulatory query" process to deal with equivalencies.

8.1 Training and Qualifications Exemption Notification Form

A. GENERAL INFORMATION

Operator: _____ Installation: _____

Name: _____ Position: _____ Employer: _____

Date of Last Medical (Attach copy): _____

Course/Qualification Exempted From: _____

Duration of Exemption: _____

B. REASON FOR EXEMPTION

C. PLAN TO ACHIEVE COMPLIANCE

D. INTERIM MITIGATION MEASURES

E. APPROVALS

a. Operator's Sr. Onshore Representative	Date:
b. Offshore Installation Manager	Date:
c. Exempted Individual	Date:

F.. DISTRIBUTION

- C-NLOPB/CNSOPB (A copy must be provided to the Board having jurisdiction prior to the individual traveling offshore. If outside normal business hours, the form may be forwarded to the Board the next working day).
- Exempt Individual (To be retained by the individual for the duration of the exemption).
- Offshore Installation Manager (To be retained on the installation).
- Operator (To be retained at shore base).

9 TQC Terms of Reference

1. The Atlantic Canada Offshore Petroleum Training and Qualifications Committee (the Committee) is *formed voluntarily* by the Canada–Newfoundland and Labrador Offshore Petroleum Board; the Canada–Nova Scotia Offshore Petroleum Board; (the Boards), the Canadian Association of Oilwell Drilling Contractors (CAODC), and the Canadian Association of Petroleum Producers (CAPP) to develop and maintain the *Atlantic Canada Offshore Petroleum Industry Standard Practice for the Training and Qualifications of Personnel* (the Standard Practice).
2. The Committee shall be comprised of one representative from each of the Boards, two representatives of the CAODC and three representatives of CAPP. These voting members of the Committee will be named by their respective organizations. The Committee will select a chairperson from the voting membership for a two-year term.
3. The Committee will retain the services of a competent consultant and/or a CAPP employee to act as secretary and to write, edit and maintain the *Standard Practice* or perform other dedicated duties in accordance with the wishes of the Committee. The secretary shall schedule and issue agendas for all meetings and maintain records of all Committee decisions under the supervision of the chairperson.
4. Voting members may have alternates attend meetings in their absence. However a quorum will consist of four “voting members” and must include a representative from *at least* one of the Boards. All Committee decisions will be made by consensus. Where consensus is not achieved a vote will be held.
5. The Committee reports to the Boards and the CAPP Atlantic Canada Safety Committee. All major decisions *made, and* any public documents produced, by the Committee will be referred to these groups for ratification.
6. The Committee commits to carrying out an external stakeholder consultation process (45 day process) including JOSH Committees and other external stakeholders as deemed appropriate by the Committee. The Committee will consult other affected parties as and when necessary. Every reasonable effort will be made to consult affected parties before decisions are made.
7. The *Standard Practice, once ratified by the Boards*, will apply to all offshore petroleum operations that are authorized by the Boards *to the extent the Standard Practice is consistent with the requirements laid down in applicable legislation. The Committee will endeavor to incorporate the best industry practice in the development and maintenance of the Standard Practice.*
8. The Boards and the petroleum industry will use the *Standard Practice* to the extent practicable in *applying* applicable legislation and in providing appropriate levels of training and certification in accordance with good industry practice. The *Standard*

Practice is not intended to be all inclusive and simple adherence to the *Standard Practice* may not be sufficient to ensure an operator's or employer's obligations pursuant to relevant applicable legislation.

9. CAPP is the custodian of the *Standard Practice* and the Boards will administer the *Standard Practice*. It is recognized that the legislation and orders of the Boards' Safety Officers made pursuant to the legislation take precedence over the *Standard Practice*.
10. For any specific requirement laid down in the *Standard Practice* the Boards may, ***subject to the legislation***, accept an alternate measure, approach, training course or certificate where they are satisfied that the alternate provides for an equivalent or satisfactory level of competence and safety.
11. The *Standard Practice* will be reviewed on an on-going basis by the Committee and will be revised and re-issued every two years¹ until such time as the Committee deems there are no more updates or changes necessary.

¹ In the instance where a change is substantive or time sensitive and required prior to the issuance of a new publication, an addendum will be published.

10 Glossary

semi-submersible installation - a drilling installation with the main deck connected to an underwater hull or hulls by columns or caissons.

drilling installation - a drillship, semi-submersible, jack-up or other vessel or structure used in a drilling program and fitted with a drilling rig, and includes the drilling rig and other facilities related to the drilling program that are installed on the vessel or structure.

drilling rig - the plant used to make a well by boring or other means and includes a derrick, draw works, rotary table, mud pump, blowout preventer, accumulator, choke manifold and other associated equipment including power, control and monitoring systems.

drillship - a drilling installation with a ship-shaped single- or multiple-hull arrangement.

dynamically positioned – an installation that is held in position wholly or partly by means of propulsion units that are interfaced with some form of geographic reference system.

emergency drill - a pre-arranged event whereby personnel can establish and practice a routine with respect to their role in an emergency.

emergency exercise - a pre-arranged event in which personnel can demonstrate their emergency response capabilities and identify strengths and weaknesses in an operator's emergency action plan.

employee - a person employed by or contracted to perform work under the supervision of an employer.

employer - a person or organization who employs one or more employees contracted to perform work in the workplace and includes an employer's organization and any person who acts on behalf of an employer.

energy authority - the agency responsible for the administration of legislation governing the exploration and development of oil and gas in an offshore area of the frontier lands.

engine-room assistant - a rating that is engaged as an assistant to an engineer.

engine-room rating - a rating who forms part of a watch in the engine room, but does not include an engine-room assistant, a rating who is in training or a rating whose duties while on watch are of an unskilled nature.

installation - a drilling installation or a production installation.

level one first aid attendant - a qualified person who is the holder of a valid certificate issued for the successful completion of either an emergency first aid course of at least one day duration or a standard first aid course of at least two days duration.

level two first aid attendant - a qualified person who is the holder of valid certificates issued for the successful completion of either an advanced first aid course of at least five days duration or a mariners first aid course of at least five days duration, and in cardiopulmonary resuscitation (CPR).

motor ship - a ship on which the propulsive power is derived from an internal combustion engine.

operator - a person who has applied for, or has been issued, a Production Operations Authorization or a Drilling Program Authorization.

person-in-charge of the deck watch - a person who has immediate charge of the navigation, maneuvering, operation or security of an installation.

production facility - the equipment used for the production of oil or gas located on a production installation, and includes separation, treating and processing facilities, equipment and facilities used in support of production operations, storage areas or tanks and dependent personnel accommodations.

production installation - a production facility and any associated platform, artificial island, subsea production system, offshore loading system, drilling equipment, facilities relating to marine activities and dependent diving system.

qualified instructor - in respect of a specified course, a person who, because of his knowledge, training and experience, is qualified to provide instruction that is consistent with the objectives of the course.

qualified person - in respect of a specified duty, a person who, because of his knowledge, training and experience, is qualified to perform that duty safely and properly.

radio watch - the period during which a member of the complement is required to be at, and in charge of, the radio communication equipment.

rating - a person who is a member of a ship's crew other than the master or an officer.

regularly assigned personnel - personnel whose usual place of employment is onshore but who, in the course of their duties, may be required to work offshore.

self-propelled installation - an installation that is certified to navigate independently.

total installed power - the total electrical power generated on an installation for supplying all services necessary for maintaining the installation in normal operational and habitable conditions.

training and qualifications committee - the committee formed voluntarily by the Canadian Association of Petroleum Producers, the Canadian Association of Oilwell Drilling Contractors, the Canada-Newfoundland Offshore Petroleum Board and the Canada-Nova Scotia Offshore Petroleum Board to develop and maintain the *Atlantic Canada Offshore Petroleum Industry: Standard Practice for the Training and Qualification of Personnel*.

visitor - a person who will not spend more than six nights on an offshore installation in any twelve month period.

11 Basic Survival Training – Competency Standard

11.1 Introduction

11.1.1 Competency Training Standards

The Atlantic Canada Training and Qualifications Committee recognized a need to expand on the level of detail previously provided for safety training courses required by the Atlantic Canada Offshore Petroleum Industry Standard Practice for the Training and Qualifications of Personnel. The following three courses are initially included in this process to re-draft training standards; other safety training courses will be adopted into this new format over time:

Basic Survival Training (BST)
Basic Survival Training Recurrent (BST-R)
Offshore Survival Introduction (OSI)

The three courses, BST, BST-R and OSI are closely related and cover similar topics. The intention of the revised standards is to provide clarity as to what a person must know, understand or be able to perform after having successfully completed a program or course.

This provides the input for training providers to deliver their programs, assists in alignment of quality and content, aligns expectations towards the industry and enables comparison with other global training standards.

To visualize the differences the competence statements of all three courses are captured in Table 1. In addition, for each course a separate Table is available:

Table 2 – Competence requirements BST
Table 3 – Competence requirements BST-R
Table 4 – Competence requirements OSI

11.1.2 Applies To

The individuals who are required to take this training are identified within the current Standard Practice. It is important to emphasize that the 3 courses mentioned above are non-specialist courses. The learning objectives mainly address things on a basic level.

The focus of the OSI is on general awareness and self-rescue. The nature of the incidental visitor offshore is that he/she will perform basic tasks under supervision of others.

The focus of the BST and BST-R is on self-rescue and performing basic tasks. The awareness of offshore-workers with their own work-environment, processes and resources requires an increased knowledge and understanding as these persons will also operate without supervision.

The focus of the BST-R is identical to the BST. The BST-R is used to maintain the BST competences. The focus lies more on the actual performance criteria, since the underpinning knowledge and understanding is considered a pre-requisite for the course.

If people are to become part of a lifeboat crew, fire-team or SCBA rescue-team, for instance, or are to perform maintenance on safety equipment they must receive more exposure to the subject matter and gain more knowledge and skills to become fully familiar with the equipment and the operational aspects. These additional training requirements are also defined within this Standard Practice

11.2 DEFINING COMPETENCE

11.2.1 Formulation

Each competence requirement is derived from a task that needs to be performed. The competence requirement is formulated in objective format to clearly define what has to be done to satisfy the requirements of the competence. Each statement can be preceded by the phrase: “The trainee must be able to.....” This is also of the basis for assessment criteria and measuring individual competencies.

The competence requirements are grouped into functional domains, which are further sub-divided into subject-based groups.

Three columns in Table 1 indicate the applicability of the competence statement for the respective course, Offshore Survival Introduction (OSI), Basic Survival Training (BST) and Basic Survival Training Recurrent (BST-R).

11.2.2 Competence Type

Activities and lessons that comprise the BST, BST-R and OSI courses are designated with the following descriptors which define the outcome (competence) expected of the trainee.

Perform (P1)	Trainee must perform and complete the task individually and independently to the satisfaction of the instructor.
Demonstrate / Participate (P2)	Trainee must complete the specified individual or team task to the satisfaction of the instructor.
Observe (P3)	Trainee must observe, either independently or as part of a group, the specified task. The activity being observed must occur in an area suitable for all observers to clearly see and hear the demonstration.
Describe / Identify (L)	Trainee must be able to adequately identify or describe the specified topic as requested by the instructor

P = practical tasks/exercises - hands on task (this requires that representative* equipment is included in the demonstration/activity)

L = lecture – discussion led by instructor (often includes representative* equipment)

*representative to the extent practicable

11.2.3 Responsibilities of the training provider

It is the responsibility of the training provider to ensure that their training program addresses all competences in the table to the extent that each trainee is able to demonstrate what is expected of them. By issuing a certificate of completion the training provider states that the individual meets the expected standard.

The table is restrictive in the sense that it states the minimum competence requirements to be achieved during the courses. It is not restrictive in how the training provider organizes the training or clusters various elements in a session.

11.3 Table 1 COMPETENCE TABLE BST, BST-R and OSI

Table 1: Competence Requirements BST, BST-R and OSI					
ID	Competence statement	Competence Type	OSI	BST	BST-R
1	WORKING OFFSHORE				
1.1	<i>The industry</i>				
1.1.1	Describe, generally, offshore petroleum exploration and production	L		•	
1.1.2	Identify the most common types of offshore installations	L		•	
1.2	<i>Managing risks</i>				
1.2.1	Describe the most common hazards and emergencies associated with working offshore	L	•	•	•
1.2.2	Describe the safety organization / structure on board an installation	L		•	•
1.2.3	Describe the 'hazard chain'	L		•	
1.2.4	Describe measures introduced offshore to manage and control risks	L		•	
1.2.5	Describe a Permit To Work system	L		•	
1.3	<i>Personnel transfer</i>				
1.3.1	Describe the personnel transfer devices primarily used in Canadian waters, including appropriate timing for stepping on or off if appropriate	L	•	•	
1.3.2	Describe the risks and weather limitations associated with the use of personnel transfer devices	L		•	
1.3.3	Demonstrate correct positioning and behavior during a personnel transfer referencing various devices in use	P2		•	
1.3.4	Describe the personal protective equipment required during personnel transfer	L		•	
2	HELICOPTER SAFETY & EMERGENCY PROCEDURES				
2.1	<i>Helicopter operations</i>				
2.1.1	Identify the most critical phases in helicopter flight operations	L	•	•	•
2.1.2	Identify tasks and responsibilities of the helicopter support staff (e.g. ground team, HLO, fire-team)	L		•	
2.1.3	Describe pre-flight suit-up procedures and checks.	L	•	•	
2.1.4	Describe the boarding and disembarking procedures	L	•	•	
2.1.5	Describe the check-in procedure and applicable restrictions (e.g. ID, medical, luggage, forbidden items)	L	•	•	
2.1.6	Describe the features of the helicopter passenger transportation suit systems	L	•	•	•
2.1.7	Perform the donning of a representative helicopter passenger transportation suit system (i.e. importance of proper fit; storage considerations; burping, etc.)	P1	•	•	•
2.1.8	Identify the available Personal Protective Equipment used during helicopter transfer	L	•	•	•

Table 1: Competence Requirements BST, BST-R and OSI

ID	Competence statement	Competence Type	OSI	BST	BST-R
2.1.9	Demonstrate correctly strapping in a four point harness, avoiding HUEBA-entanglement and incorrect buckle-position	P2	•	•	•
2.1.10	Describe the importance of wearing the harness during all phases of the flight	L	•	•	•
2.2	<i>Helicopter emergency procedures</i>				
2.2.1	Describe the rationale for Helicopter Underwater Egress Training (HUET)	L	•	•	•
2.2.2	Identify various forms of emergency landings (on land and water)	L	•	•	•
2.2.3	Identify the announcement to prepare for an emergency landing	L	•	•	•
2.2.4	Describe the purpose of securing loose items and the brace position during an emergency landing	L	•	•	•
2.2.5	Demonstrate the sequence of actions to prepare for an emergency landing on water, including getting watertight while secured in a four point harness	P2	•	•	•
2.2.6	Demonstrate the use of available personal safety equipment on board the helicopter	P2	•	•	•
2.2.7	Demonstrate the brace-position while secured in a four point harness and outfitted with a HUEBA	P2	•	•	•
2.2.8	Demonstrate a thorough orientation of the helicopter interior (primary/secondary exits, other passengers, reference points)	P2	•	•	•
2.2.9	Describe the possible consequences and considerations for emergency evacuation / egress if a helicopter is outfitted with stroking seats	L	•	•	•
2.2.10	Demonstrate preparing an escape window and emergency exit in accordance with the flight safety card and available instructions	P2	•	•	•
2.2.11	Describe when to prepare an escape window and when to actually jettison the window	L	•	•	•
2.2.12	Describe the risks and points of attention of evacuating an upright helicopter	L	•	•	•
2.2.13	Describe the sequence of actions when evacuating an upright helicopter after a controlled surface landing	L	•	•	•
2.2.14	Describe the importance of remaining strapped in during a surface evacuation until instructed / ready to exit	L	•	•	•
2.3	<i>Helicopter emergency equipment</i>				
2.3.1	Describe marine-related safety features available on offshore helicopters	L	•	•	•
2.3.2	Identify available emergency equipment and exits and their operation	L	•	•	•
2.3.3	Identify the major components of an aviation raft	L		•	•
2.3.4	Describe the differences between aviation rafts and marine rafts	L		•	•
2.3.5	Describe the launching procedure for an aviation raft	L		•	•
2.3.6	Participate in deploying an aviation raft.	P2		•	•
2.3.7	Demonstrate immediate and subsequent actions in the aviation raft after the helicopter has been abandoned	P2		•	•

Table 1: Competence Requirements BST, BST-R and OSI					
ID	Competence statement	Competence Type	OSI	BST	BST-R
2.3.8	Identify the survival aids available in an aviation raft	L		•	•
2.4	Helicopter egress				
2.4.1	Describe the importance of waiting with seat belt buckled for rolling motion to stop and helicopter to fill with water before egressing an inverted helicopter	L	•	•	•
2.4.2	Identify the advantages of clearing escape windows prior to capsize.	L	•	•	•
2.4.3	Describe the need for equalization of water-pressure before being able to jettison an emergency window under water	L	•	•	•
2.4.4	Demonstrate a surface evacuation from an upright HUET into an aviation raft, including exit preparation	P2	•	•	•
2.4.5	Demonstrate an inverted underwater egress from the HUET while seated next to an already open representative emergency exit / push-out escape window requiring exit / window to be jettisoned on impact	P2	•	•	•
2.4.6	Perform an unassisted inverted underwater egress from the HUET, while seated next to a closed representative push-out escape window, requiring the window to be jettisoned underwater	P1	•	•	•
2.4.7	Demonstrate the same egress as 2.4.6 from the opposite side of the HUET (demonstrate either 2.4.6 or 2.4.7 from a fully stroked seat position)	P2	•	•	•
2.4.8	Demonstrate an inverted underwater egress from a seat not located immediately next to an already open representative emergency exit / push-out escape window	P2	•	•	•
2.4.9	Demonstrate when and how to activate an inflatable passenger transportation suit buoyance system, including the use of available protective features (e.g. spray shield, gloves)	P2	•	•	•
2.4.10	Describe underwater egress considerations with respect to the presence of an auxiliary fuel tank	L	•	•	•
2.5	Helicopter Underwater Emergency Breathing Apparatus (HUEBA)				
2.5.1	Describe the rationale for using a compressed air helicopter underwater emergency breathing apparatus (HUEBA)	L	•	•	
2.5.2	Describe the components, specifications and limitations of the HUEBA	L	•	•	
2.5.3	Describe the hazards related to using compressed air under water and importance of continuous exhaling during underwater ascent	L	•	•	•
2.5.4	Describe the procedure for using the HUEBA	L	•	•	•
2.5.5	Demonstrate a pre-flight inspection of HUEBA	P2	•	•	•
2.5.6	Identify potential HUEBA malfunctions	L	•	•	•
2.5.7	Identify if a HUEBA is in the open or closed position and fully charged	L	•	•	•
2.5.8	Describe the steps involved in initiating the use of the HUEBA while still above the surface	L	•	•	•
2.5.9	Describe the steps involved in initiating the use of the HUEBA when submerged	L	•	•	•
2.5.10	Demonstrate carrying out breathing actions using HUEBA in a dry environment	P2	•	•	•
2.5.11	Demonstrate the deployment of a HUEBA in water	P2	•	•	•

Table 1: Competence Requirements BST, BST-R and OSI

ID	Competence statement	Competence Type	OSI	BST	BST-R
2.5.12	Demonstrate clearing the second stage using the purge button in water	P2	•	•	•
2.5.13	Demonstrate clearing the second stage using the blast method (through exhaling) in water	P2	•	•	•
2.5.14	Demonstrate breathing HUEBA bottle to empty in water	P2	•	•	•
2.5.15	Demonstrate the correct use of a HUEBA while seated in an inverted, submerged situation (surface water)	P2	•	•	•
3	FIRE SAFETY				
3.1	<i>Prevention, detection and control of fire</i>				
3.1.1	Describe how good housekeeping contributes to fire-prevention	L		•	
3.1.2	Describe the importance of good maintenance in relation to prevention, detection and control of fire	L		•	
3.1.3	Demonstrate the proper sequence of actions after detecting a fire	P2		•	
3.1.4	Describe the proper sequence of actions after detecting a fire	L	•		•
3.1.5	Describe the 'fire tetrahedron' in relation to the principle of firefighting	L		•	
3.1.6	Describe the limitations of using hand-held fire-extinguishers	L		•	
3.1.7	Describe different states of fuel	L		•	
3.1.8	Identify the various classes of fire	L		•	
3.1.9	Describe the methods of heat transfer and how they influence firefighting and fire control	L		•	
3.1.10	Describe the causes of 'fire spread' and measures available offshore to limit this spread	L		•	
3.1.11	Describe the terms 'flashpoint', 'fire point' and 'auto-ignition temperature'	L		•	
3.1.12	Describe how to find the flammable limits / range for a given product	L		•	
3.1.13	Describe the different extinguishing agents and their principles	L		•	
3.1.14	Describe active and passive fire control systems found offshore	L		•	
3.2	<i>Fire response</i>				
3.2.1	Identify the appropriate extinguisher based on a fire class	L		•	
3.2.2	Demonstrate extinguishing a Class B fire using an appropriate handheld extinguisher, demonstrating correct procedure and safe angle of attack	P2		•	•
3.2.3	Demonstrate extinguishing a small-scale 3 dimensional liquid fuel fire using an appropriate handheld extinguisher, demonstrating correct procedure and safe angle of attack	P2		•	
3.2.4	Demonstrate extinguishing a small solid fuel fire using an appropriate handheld extinguisher, demonstrating correct procedure and safe angle of attack	P2		•	
3.2.5	Describe the use of a fire-blanket	L		•	
3.2.6	Describe how a semi-portable extinguisher is primed and used	L		•	

Table 1: Competence Requirements BST, BST-R and OSI

ID	Competence statement	Competence Type	OSI	BST	BST-R
3.2.7	Demonstrate preparing a fire hose for use	P2		•	
3.2.8	Demonstrate hose-handling techniques	P2		•	
3.2.9	Demonstrate boundary cooling under supervision	P2		•	
3.2.10	Describe when and how to use the various nozzle-settings	L		•	
3.2.11	Describe the dangers of working with a fire hose under pressure	L		•	
3.3	<i>Self Contained Breathing Apparatus (SCBA)</i>				
3.3.1	Describe the possibilities and limitations of using a SCBA set	L		•	
3.3.2	Identify the main components and features of a SCBA set	L		•	
3.3.3	Demonstrate estimating the operating time of the SCBA set, given the air supply and consumption rate	P2		•	
3.3.4	Describe the consequences of physical / mental condition on air consumption	L		•	
3.3.5	Identify conditions when the quality of compressed air may should be questioned	L		•	
3.3.6	Demonstrate preparing a SCBA-set for use	P2		•	
3.3.7	Demonstrate pre-use checks on a positive pressure / full face-piece SCBA set	P2		•	
3.3.8	Describe problems with a SCBA set	L		•	
3.3.9	Demonstrate the methods to don a SCBA set	P2		•	
3.3.10	Demonstrate donning a SCBA set for emergency egress in an oxygen deficient environment while using the proper technique to breathe breathable air (i.e. don face piece prior to donning set) – consideration given to undertaking this competency as quickly as possible	P2		•	
3.3.11	Demonstrate an escape using a SCBA set from a no visibility environment, while using the proper technique and establishing reference points	P2		•	
3.3.12	Demonstrate appropriate action after recognizing a low level alarm of a SCBA set	P2		•	
3.4	<i>Personal escape devices</i>				
3.4.1	Describe how to use a smoke-hood	L	•	•	
3.4.2	Demonstrate an escape using a smoke-hood from a low visibility environment while demonstrating the proper technique and establishing reference points	P2		•	•
3.4.3	Describe how to use an Emergency Escape Breathing Device (EEBD)	L	•	•	
4	ABANDONMENT & SURVIVAL				
4.1	<i>Emergency preparedness & response</i>				
4.1.1	Describe personal measures to take in order to be prepared for an emergency	L	•	•	
4.1.2	Describe the contents of a station bill	L	•	•	
4.1.3	Identify various alarms and status lights on the installation	L	•	•	

Table 1: Competence Requirements BST, BST-R and OSI					
ID	Competence statement	Competence Type	OSI	BST	BST-R
4.1.4	Describe the general actions taking place on an installation during an emergency	L	•	•	
4.1.5	Describe various roles and responsibilities in abandonment situations (including mustering)	L	•	•	•
4.2	<i>Enemies of survival</i>				
4.2.1	Identify the various human responses which can be expected under stress or in emergencies	L	•	•	
4.2.2	Identify threats to, survival, including the physical and mental enemies,	L	•	•	•
4.2.3	Describe prioritized actions to reduce threats to survival	L	•	•	•
4.2.4	Describe factors which influence survival time	L	•	•	
4.2.5	Describe ways to prevent or slow down the development of cold water injuries	L		•	
4.2.6	Identify signs and symptoms of hypothermia	L		•	
4.2.7	Describe methods to treat hypothermia in a survival situation	L		•	
4.2.8	Describe what is meant by 'post rescue collapse'	L		•	
4.2.9	Describe available emergency rations and rationing routine in a survival situation	L		•	
4.3	<i>Personal flotation Apparatus</i>				
4.3.1	Describe the importance, working characteristics and limitations of personal flotation apparatus with regards to buoyancy, thermal protection and self-righting capabilities (i.e. proper fit)	L	•	•	
4.3.2	Describe the difference between a lifejacket and a personal flotation device (PFD)	L		•	
4.3.3	Describe additional safety features available on personal flotation apparatus	L		•	
4.3.4	Demonstrate donning a fixed buoyancy type lifejacket	P2		•	
4.3.5	Observe the use of a lifebuoy including deployment, casualty in-water actions and casualty recovery	P3		•	•
4.3.6	Perform donning a representative immersion suit	P1	•	•	•
4.3.7	Demonstrate in-water behaviour while wearing a representative immersion suit	P2	•	•	•
4.3.8	Demonstrate in-water behavior while wearing a life-jacket including the HELP position	P2		•	
4.4	<i>Abandonment</i>				
4.4.1	Describe the methods of abandonment which could be available for an emergency evacuation under controlled circumstances	L	•	•	•
4.4.2	Describe the primary/preferred methods of abandonment under controlled circumstances in case of a developing emergency	L	•	•	•
4.4.3	Identify the secondary equipment available for abandonment	L	•	•	•
4.4.4	Identify the tertiary equipment available for abandonment	L	•	•	•
4.4.5	Describe how to use a Donut escape device	L		•	•

Table 1: Competence Requirements BST, BST-R and OSI					
ID	Competence statement	Competence Type	OSI	BST	BST-R
4.4.6	Describe how to prepare escape chute for use	L		•	
4.4.7	Demonstrate a descent using escape chute	P2	•	•	•
4.4.8	Demonstrate a controlled water entry	P2	•	•	•
4.4.9	Demonstrate the use of a rope ladder (embarkation, pilot or Jacobs)	P2	•	•	•
4.4.10	Describe the in-water group formations and their importance	L		•	•
4.4.11	Describe in-water positions intended to reduce heat loss	L		•	•
4.4.12	Demonstrate in-water group survival formations	P2		•	•
4.4.13	Demonstrate swimming formations	P2		•	•
4.4.14	Demonstrate proper step-off technique from a minimum height of 1 meter	P2		•	•
4.4.15	Participate in an evacuation at sea, making use of available lifesaving equipment	P2		•	•
4.5	<i>Distress signals</i>				
4.5.1	Identify the electronic, audible and visual distress signals available offshore	L	•	•	•
4.5.2	Describe the working principles of an EPIRB, SART and PLB	L		•	•
4.5.3	Identify the VHF radio emergency channel	L		•	•
4.5.4	Observe the basic use of a VHF radio	P3		•	•
4.5.5	Describe the use of a heliograph	L		•	•
4.5.6	Describe the quantity of pyrotechnics available in the inventory of a survival craft and when to use each type	L		•	•
4.5.7	Describe the working principle, points of attention and limitations of pyrotechnic distress signals	L	•	•	•
4.5.8	Demonstrate safe pyrotechnics activation	P2		•	
4.5.9	Observe demonstration of safe pyrotechnics activation	P3			•
5	SURVIVAL CRAFT				
5.1	<i>Totally Enclosed Motor Propelled Survival Craft (TEMPSC)</i>				
5.1.1	Describe the importance of the mustering-process	L	•	•	
5.1.2	Identify methods used offshore to perform a headcount during mustering	L	•	•	
5.1.3	Describe why a TEMPSC should be regarded as the primary means of escape in case of water abandonment	L	•	•	
5.1.4	Identify the features of a typical TEMPSC	L	•	•	•
5.1.5	Identify different davit systems and launching systems used for TEMPSC (including hook systems)	L	•	•	•
5.1.6	Describe the difference between on load and off load release	L		•	•

Table 1: Competence Requirements BST, BST-R and OSI					
ID	Competence statement	Competence Type	OSI	BST	BST-R
5.1.7	Describe the relationship between the self-righting capability of the TEMPSC and the weight-division inside	L		•	•
5.1.8	Describe the consequences if passengers and equipment in a TEMPSC are not secured	L		•	•
5.1.9	Identify how a TEMPSC is operated	L		•	•
5.1.10	Participate during an alarm, mustering, boarding and launching of a TEMPSC as a passenger (possible scenarios could include operating sprinkler, air, MOB-assistance, stretcher transfer)	P2		•	•
5.2	<i>Life rafts - General</i>				
5.2.1	Describe the different components and features of life rafts and their functionality (including different labels found on the life raft storage container and their importance)	L		•	•
5.2.2	Describe hydrostatic release of life rafts in case of sinking vessels or structures	L		•	•
5.2.3	Describe the inventory & equipment found in the life raft	L		•	•
5.2.4	Identify the tow-patch on the life raft and explain its importance during life raft marshalling/surface support	L		•	•
5.2.5	Participate in the righting of a capsized life raft wearing an immersion suit	P2		•	
5.2.6	Observe the procedure for righting of a capsized life raft with demonstrator wearing a representative immersion suit	P3			•
5.2.7	Demonstrate boarding a life raft from the water unassisted while wearing an immersion suit	P2		•	•
5.2.8	Demonstrate boarding a life raft using the buddy system while wearing representative immersion suits	P2		•	•
5.2.9	Demonstrate a dry life raft-entry from a ladder or other means of descent while wearing an immersion suit	P2		•	•
5.2.10	Observe a condition check of a life raft	P3		•	•
5.2.11	Describe the importance of staying in contact with the life raft's painter line when in the water	L		•	•
5.2.12	Demonstrate an in water rescue of others while maintaining contact with the life raft	P2		•	•
5.2.13	Demonstrate survival routines in a life raft	P2		•	•
5.3	<i>Life rafts -Throw overboard</i>				
5.3.1	Identify the most favorable location to launch a life raft, considering the prevailing conditions (e.g. wind, current)	L		•	•
5.3.2	Describe how to prepare and deploy a throw overboard type life raft	L		•	
5.3.3	Describe the considerations when moving a life raft container	L		•	•
5.3.4	Participate in deploying a throw overboard type life raft	P2		•	•
5.4	<i>Life rafts – Davit launched</i>				
5.4.1	Identify davit launched life rafts on deck	L		•	•
5.4.2	Describe the steps of davit crane operation	L		•	

Table 1: Competence Requirements BST, BST-R and OSI

ID	Competence statement	Competence Type	OSI	BST	BST-R
5.4.3	Describe the sequence of actions of launching a davit launched life raft	L		•	•
5.4.4	Describe the functionality of the different lines connected to the davit launched life raft and its container	L		•	•
5.4.5	Describe that a davit launched life raft can also be launched as a throw overboard type life raft	L		•	•
5.4.6	Describe how an offload release hook must be operated during a launch	L		•	•
5.4.7	Describe the actions and precautions to be taken prior to releasing the remote winch-brake from the life raft	L		•	•
5.4.8	Participate in the launching procedures of a davit-launched life raft	P2		•	•
6	SEARCH & RESCUE				
6.1	<i>SAR-organization</i>				
6.1.1	Describe the structure of the SAR-organization in Canadian waters	L		•	•
6.1.2	Describe the available SAR-resources for Canadian waters (i.e. mutual aid, Automated Merchant Vessel Emergency Reporting System, etc.) including description of the operator provided SAR program (SBV, HELO)	L		•	•
6.2	<i>The rescue</i>				
6.2.1	Identify which information is essential to provide to the SAR-organization in case of an abandonment	L		•	
6.2.2	Identify likely methods of rescue following an emergency in Canadian waters	L	•	•	•
6.2.3	Describe the personal preparations to be made before a rescue	L	•	•	•
6.2.4	Describe the preparations to be made to the survival craft before a rescue	L		•	•
6.2.5	Describe limitations of SAR-resources and their need for prioritizing (i.e. discussion on SAR resources and how it applies to an offshore emergency rescue)	L		•	
6.2.6	Describe safety considerations by SAR-units during a rescue and possible delays due to conditions	L		•	
6.2.7	Describe the search and rescue equipment available on SAR-helicopters	L		•	•
6.2.8	Describe the points of attention when being rescued by helicopter equipment (i.e. hoist, frame)	L		•	
6.2.9	Demonstrate the correct procedure for rescue by helicopter (i.e. hoist, frame)	P2		•	
6.2.10	Describe how SKAD-deployment may be used during a rescue. (SKAD = Survival Kit Air Droppable)	L		•	•
6.2.11	Describe the rescue equipment available on offshore installations and standby vessels	L		•	•
6.2.12	Identify the points of attention when being rescued by a fast rescue boat	L		•	•
6.2.13	Observe the proper behavior while being rescued by a fast rescue boat with the use of a rescue frame / net	P3		•	•
6.2.14	Observe alternate systems for retrieval (i.e. of healthy individuals) from a life raft or fast rescue boat	P3		•	
6.2.15	Demonstrate a transfer from a TEMPSC to a Fast Rescue Boat	P2		•	•

ID	Competence statement	Competence Type	OSI	BST	BST-R
6.2.16	Demonstrate a transfer from a Fast Rescue Boat to a vessel	P2		•	•
6.2.17	Demonstrate a self-rescue from the water to a safe area using a scramble-net or rope ladder (embarkation, pilot or Jacobs)	P2		•	•

11.4 Equipment Requirements

- All equipment, including personal protective equipment, used within the training will be, to the extent practicable, best representative of that used offshore.
- All equipment will be maintained in accordance with applicable standards, certifications, codes, OEM practices or documented maintenance programs, appropriately taking into account the training environment within which it is being used.
- Training Institutes will ensure appropriate and sufficient personal protective equipment is available for all trainees, and that training course delivery and changes to it over time are evaluated via risk assessment, to ensure the training is conducted safely and in compliance with applicable provincial regulations.
- The following specific equipment is a minimum listing of requisite materials for any course designed to meet this standard:
 - § Pool which includes a shallow end area/platform; pool temp minimum of 16 C°
 - § Helicopter Underwater Egress Trainer/Simulator that:
 - is capable of full rotation underwater
 - has a means of emergency stopping during rotation and lift from water
 - is configurable to be representative of helicopter types and common configurations used offshore Atlantic Canada (including harnesses; seat backs; emergency exits and windows height, sizing and positioning; emergency exit/window release mechanisms; seat spacing; seat pitch; seat stroking properties, etc.)
 - has a minimum of one stroking seat to simulate a full eight inches of travel;
 - has window and aisle seating;
 - has forward and rear facing seats as found in aircraft types
 - has windows requiring realistic amount of force to jettison;
 - has all exits/release mechanisms labeled as per their operation;
 - has a simulated auxiliary fuel tank for the aircraft types in Atlantic Canada;

- is operated via man riding rated crane; and
 - includes an aviation life raft with representative assortment of survival equipment
- § Helicopter Underwater Emergency Breathing Apparatus (HUEBA)
- § Inversion training chair for use in a pool (representative of seats and harnesses used in helicopters flown offshore in Atlantic Canada and capable of rotation underwater while maintaining the trainee use same language as in HUEBA training 2010 publication)
- § Totally enclosed motor propelled survival craft (TEMPSC) & Launching Systems
- § Fast Rescue Boat(s) capable of personnel transfer
- § Ocean Going Vessel that:
- has capacity adequate for one class with instructors and support personnel; and
 - is outfitted with throw-over life raft
- § Fire field complete with:
- pollution control system; and
 - open fire pits
- § Any other equipment required for practical or classroom demonstrations, including but not limited to:
- immersion suits representative of those used commonly in Atlantic Canada
 - lifejackets
 - PFDs
 - life buoy
 - helicopter passenger transportation suits representative of those used commonly in Atlantic Canada
 - self-contained breathing apparatus (SCBA)
 - smoke hoods
 - VHF radios
 - SOLAS approved pyrotechnics including red rocket, red hand and orange smoke
 - SOLAS Life Raft module
 - life raft SOLAS 'A' pack
 - life raft canister with cradle
 - life raft hydrostatic release unit
 - electronic signaling devices representative of those found offshore including PLB, EPIRB, SART and VHF radio
 - grab bag representative of those used offshore
 - personal descent device - DONUT System

- scramble net
- escape chute
- rope ladder
- helicopter rescue equipment

11.5 Table 2 - COMPETENCE TABLE – Basic Survival Training (BST)

NOTE: the ID numbering relates to Table 1 which lists all three survival training courses; therefore, some numbers may not appear in the table below.

ID	Competence Statement	Competence Type	BST
1	WORKING OFFSHORE		
1.1	<i>The industry</i>		
1.1.1	Describe, generally, offshore petroleum exploration and production	L	•
1.1.2	Identify the most common types of offshore installations	L	•
1.2	<i>Managing risks</i>		
1.2.1	Describe the most common hazards and emergencies associated with working offshore	L	•
1.2.2	Describe the safety organization / structure on board an installation	L	•
1.2.3	Describe the 'hazard chain'	L	•
1.2.4	Describe measures introduced offshore to manage and control risks	L	•
1.2.5	Describe a Permit To Work system	L	•
1.3	<i>Personnel transfer</i>		
1.3.1	Describe the personnel transfer devices primarily used in Canadian waters, including appropriate timing for stepping on or off if appropriate	L	•
1.3.2	Describe the risks and weather limitations associated with the use of personnel transfer devices	L	•
1.3.3	Demonstrate correct positioning and behavior during a personnel transfer referencing various devices in use	P2	•
1.3.4	Describe the personal protective equipment required during personnel transfer	L	•
2	HELICOPTER SAFETY & EMERGENCY PROCEDURES		
2.1	<i>Helicopter operations</i>		
2.1.1	Identify the most critical phases in helicopter flight operations	L	•
2.1.2	Identify tasks and responsibilities of the helicopter support staff (e.g. ground team, HLO, fire-team)	L	•
2.1.3	Describe pre-flight suit-up procedures and checks.	L	•
2.1.4	Describe the boarding and disembarking procedures	L	•
2.1.5	Describe the check-in procedure and applicable restrictions (e.g. ID, medical, luggage, forbidden items)	L	•
2.1.6	Describe the features of the helicopter passenger transportation suit systems	L	•
2.1.7	Perform the donning of a representative helicopter passenger transportation suit system (i.e. importance of proper fit; storage considerations; burping, etc.)	P1	•
2.1.8	Identify the available Personal Protective Equipment used during helicopter transfer	L	•
2.1.9	Demonstrate correctly strapping in a four point harness, avoiding HUEBA-entanglement and incorrect buckle-position	P2	•

ID	Competence Statement	Competence Type	BST
2.1.10	Describe the importance of wearing the harness during all phases of the flight	L	•
2.2	<i>Helicopter emergency procedures</i>		
2.2.1	Describe the rationale for Helicopter Underwater Egress Training (HUET)	L	•
2.2.2	Identify various forms of emergency landings (on land and water)	L	•
2.2.3	Identify the announcement to prepare for an emergency landing	L	•
2.2.4	Describe the purpose of securing loose items and the brace position during an emergency landing	L	•
2.2.5	Demonstrate the sequence of actions to prepare for an emergency landing on water, including getting watertight while secured in a four point harness	P2	•
2.2.6	Demonstrate the use of available personal safety equipment on board the helicopter	P2	•
2.2.7	Demonstrate the brace-position while secured in a four point harness and outfitted with a HUEBA	P2	•
2.2.8	Demonstrate a thorough orientation of the helicopter interior (primary/secondary exits, other passengers, reference points)	P2	•
2.2.9	Describe the possible consequences and considerations for emergency evacuation / egress if a helicopter is outfitted with stroking seats	L	•
2.2.10	Demonstrate preparing an escape window and emergency exit in accordance with the flight safety card and available instructions	P2	•
2.2.11	Describe when to prepare an escape window and when to actually jettison the window	L	•
2.2.12	Describe the risks and points of attention of evacuating an upright helicopter	L	•
2.2.13	Describe the sequence of actions when evacuating an upright helicopter after a controlled surface landing	L	•
2.2.14	Describe the importance of remaining strapped in during a surface evacuation until instructed / ready to exit	L	•
2.3	<i>Helicopter emergency equipment</i>		
2.3.1	Describe marine-related safety features available on offshore helicopters	L	•
2.3.2	Identify available emergency equipment and exits and their operation	L	•
2.3.3	Identify the major components of an aviation raft	L	•
2.3.4	Describe the differences between aviation rafts and marine rafts	L	•
2.3.5	Describe the launching procedure for an aviation raft	L	•
2.3.6	Participate in deploying an aviation raft.	P2	•
2.3.7	Demonstrate immediate and subsequent actions in the aviation raft after the helicopter has been abandoned	P2	•
2.3.8	Identify the survival aids available in an aviation raft	L	•
2.4	<i>Helicopter egress</i>		

ID	Competence Statement	Competence Type	BST
2.4.1	Describe the importance of waiting with seat belt buckled for rolling motion to stop and helicopter to fill with water before egressing an inverted helicopter	L	•
2.4.2	Identify the advantages of clearing escape windows prior to capsiz.	L	•
2.4.3	Describe the need for equalization of water-pressure before being able to jettison an emergency window under water	L	•
2.4.4	Demonstrate a surface evacuation from an upright HUET into an aviation raft, including exit preparation	P2	•
2.4.5	Demonstrate an inverted underwater egress from the HUET while seated next to an already open representative emergency exit / push-out escape window requiring exit / window to be jettisoned on impact	P2	•
2.4.6	Perform an unassisted inverted underwater egress from the HUET, while seated next to a closed representative push-out escape window, requiring the window to be jettisoned underwater	P1	•
2.4.7	Demonstrate the same egress as 2.4.6 from the opposite side of the HUET (demonstrate either 2.4.6 or 2.4.7 from a fully stroked seat position)	P2	•
2.4.8	Demonstrate an inverted underwater egress from a seat not located immediately next to an already open representative emergency exit / push-out escape window	P2	•
2.4.9	Demonstrate when and how to activate an the passenger transport suit buoyance system, including the use of available protective features (e.g. spray shield, gloves)	P2	•
2.4.10	Describe underwater egress considerations with respect to the presence of an auxiliary fuel tank	L	•
2.5	<i>Helicopter Underwater Emergency Breathing Apparatus (HUEBA)</i>		
2.5.1	Describe the rationale for using a compressed air helicopter underwater emergency breathing apparatus (HUEBA)	L	•
2.5.2	Describe the components, specifications and limitations of the HUEBA	L	•
2.5.3	Describe the hazards related to using compressed air under water and importance of continuous exhaling during underwater ascent	L	•
2.5.4	Describe the procedure for using the HUEBA	L	•
2.5.5	Demonstrate a pre-flight inspection of HUEBA	P2	•
2.5.6	Identify potential HUEBA malfunctions	L	•
2.5.7	Identify if a HUEBA is in the open or closed position and fully charged	L	•
2.5.8	Describe the steps involved in initiating the use of the HUEBA while still above the surface	L	•
2.5.9	Describe the steps involved in initiating the use of the HUEBA when submerged	L	•
2.5.10	Demonstrate carrying out breathing actions using HUEBA in a dry environment	P2	•
2.5.11	Demonstrate the deployment of a HUEBA in water	P2	•
2.5.12	Demonstrate clearing the second stage using the purge button in water	P2	•
2.5.13	Demonstrate clearing the second stage using the blast method (through exhaling) in water	P2	•
2.5.14	Demonstrate breathing HUEBA bottle to empty in water	P2	•

ID	Competence Statement	Competence Type	BST
2.5.15	Demonstrate the correct use of a HUEBA while seated in an inverted, submerged situation (surface water)	P2	•
3	FIRE SAFETY		
3.1	<i>Prevention, detection and control of fire</i>		
3.1.1	Describe how good housekeeping contributes to fire-prevention	L	•
3.1.2	Describe the importance of good maintenance in relation to prevention, detection and control of fire	L	•
3.1.3	Demonstrate the proper sequence of actions after detecting a fire	P2	•
3.1.4	Describe the 'fire tetrahedron' in relation to the principle of firefighting	L	•
3.1.5	Describe the limitations of using hand-held fire-extinguishers	L	•
3.1.6	Describe different states of fuel	L	•
3.1.7	Identify the various classes of fire	L	•
3.1.8	Describe the methods of heat transfer and how they influence firefighting and fire control	L	•
3.1.9	Describe the causes of 'fire spread' and measures available offshore to limit this spread	L	•
3.1.10	Describe the terms 'flashpoint', 'fire point' and 'auto-ignition temperature'	L	•
3.1.11	Describe how to find the flammable limits / range for a given product	L	•
3.1.12	Describe the different extinguishing agents and their principles	L	•
3.1.13	Describe active and passive fire control systems found offshore	L	•
3.2	<i>Fire response</i>		
3.2.1	Identify the appropriate extinguisher based on a fire class	L	•
3.2.2	Demonstrate extinguishing a Class B fire using an appropriate handheld extinguisher, demonstrating correct procedure and safe angle of attack	P2	•
3.2.3	Demonstrate extinguishing a small-scale 3 dimensional liquid fuel fire using an appropriate handheld extinguisher, demonstrating correct procedure and safe angle of attack	P2	•
3.2.4	Demonstrate extinguishing a small solid fuel fire using an appropriate handheld extinguisher, demonstrating correct procedure and safe angle of attack	P2	•
3.2.5	Describe the use of a fire-blanket	L	•
3.2.6	Describe how a semi-portable extinguisher is primed and used	L	•
3.2.7	Demonstrate preparing a fire hose for use	P2	•
3.2.8	Demonstrate hose-handling techniques	P2	•
3.2.9	Demonstrate boundary cooling under supervision	P2	•
3.2.10	Describe when and how to use the various nozzle-settings	L	•
3.2.11	Describe the dangers of working with a fire hose under pressure	L	•

ID	Competence Statement	Competence Type	BST
3.3	<i>Self Contained Breathing Apparatus (SCBA)</i>		
3.3.1	Describe the possibilities and limitations of using a SCBA set	L	•
3.3.2	Identify the main components and features of a SCBA set	L	•
3.3.3	Demonstrate estimating the operating time of the SCBA set, given the air supply and consumption rate	P2	•
3.3.4	Describe the consequences of physical / mental condition on air consumption	L	•
3.3.5	Identify conditions when the quality of compressed air may should be questioned	L	•
3.3.6	Demonstrate preparing a SCBA-set for use	P2	•
3.3.7	Demonstrate pre-use checks on a positive pressure / full face-piece SCBA set	P2	•
3.3.8	Describe problems with a SCBA set	L	•
3.3.9	Demonstrate the methods to don a SCBA set	P2	•
3.3.10	Demonstrate donning a SCBA set for emergency egress in an oxygen deficient environment while using the proper technique to breathe breathable air (i.e. don face piece prior to donning set) – consideration given to undertaking this competency as quickly as possible	P2	•
3.3.11	Demonstrate an escape using a SCBA set from a no visibility environment, while using the proper technique and establishing reference points	P2	•
3.3.12	Demonstrate appropriate action after recognizing a low level alarm of a SCBA set	P2	•
3.4	<i>Personal escape devices</i>		
3.4.1	Describe how to use a smoke-hood	L	•
3.4.2	Demonstrate an escape using a smoke-hood from a low visibility environment while demonstrating the proper technique and establishing reference points	P2	•
3.4.3	Describe how to use an Emergency Escape Breathing Device (EEBD)	L	•
4	ABANDONMENT & SURVIVAL		
4.1	<i>Emergency preparedness & response</i>		
4.1.1	Describe personal measures to take in order to be prepared for an emergency	L	•
4.1.2	Describe the contents of a station bill	L	•
4.1.3	Identify various alarms and status lights on the installation	L	•
4.1.4	Describe the general actions taking place on an installation during an emergency	L	•
4.1.5	Describe various roles and responsibilities in abandonment situations (including mustering)	L	•
4.2	<i>Enemies of survival</i>		
4.2.1	Identify the various human responses which can be expected under stress or in emergencies	L	•
4.2.2	Identify threats to, survival, including the physical and mental enemies,	L	•
4.2.3	Describe prioritized actions to reduce threats to survival	L	•

ID	Competence Statement	Competence Type	BST
4.2.4	Describe factors which influence survival time	L	•
4.2.5	Describe ways to prevent or slow down the development of cold water injuries	L	•
4.2.6	Identify signs and symptoms of hypothermia	L	•
4.2.7	Describe methods to treat hypothermia in a survival situation	L	•
4.2.8	Describe what is meant by 'post rescue collapse'	L	•
4.2.19	Describe available emergency rations and rationing routine in a survival situation	L	•
4.3	<i>Personal flotation Apparatus</i>		
4.3.1	Describe the importance, working characteristics and limitations of personal flotation apparatus with regards to buoyancy, thermal protection and self-righting capabilities (i.e. proper fit)	L	•
4.3.2	Describe the difference between a lifejacket and a personal flotation device (PFD)	L	•
4.3.3	Describe additional safety features available on personal flotation apparatus	L	•
4.3.4	Demonstrate donning a fixed buoyancy type lifejacket	P2	•
4.3.5	Observe the use of a lifebuoy including deployment, casualty in-water actions and casualty recovery	P3	•
4.3.6	Perform donning a representative immersion suit	P1	•
4.3.7	Demonstrate in-water behaviour while wearing a representative immersion suit	P2	•
4.3.8	Demonstrate in-water behavior while wearing a life-jacket including the HELP position	P2	•
4.4	<i>Abandonment</i>		
4.4.1	Describe the methods of abandonment which could be available for an emergency evacuation under controlled circumstances	L	•
4.4.2	Describe the primary/preferred methods of abandonment under controlled circumstances in case of a developing emergency	L	•
4.4.3	Identify the secondary equipment available for abandonment	L	•
4.4.4	Identify the tertiary equipment available for abandonment	L	•
4.4.5	Describe how to use a Donut escape device	L	•
4.4.6	Describe how to prepare escape shute for use	L	•
4.4.7	Demonstrate a descent using escape shute	P2	•
4.4.8	Demonstrate a controlled water entry	P2	•
4.4.9	Demonstrate the use of a rope ladder (embarkation, pilot or Jacobs)	P2	•
4.4.10	Describe the in-water group formations and their importance	L	•
4.4.11	Describe in-water positions intended to reduce heat loss	L	•
4.4.12	Demonstrate in-water group survival formations	P2	•
4.4.13	Demonstrate swimming formations	P2	•

ID	Competence Statement	Competence Type	BST
4.4.14	Demonstrate proper step-off technique from a minimum height of 1 meter	P2	•
4.4.15	Participate in an evacuation at sea, making use of available lifesaving equipment	P2	•
4.5	<i>Distress signals</i>		
4.5.1	Identify the electronic, audible and visual distress signals available offshore	L	•
4.5.2	Describe the working principles of an EPIRB, SART and PLB	L	•
4.5.3	Identify the VHF radio emergency channel	L	•
4.5.4	Observe the basic use of a VHF radio	P3	•
4.5.5	Describe the use of a heliograph	L	•
4.5.6	Describe the quantity of pyrotechnics available in the inventory of a survival craft and when to use each type	L	•
4.5.7	Describe the working principle, points of attention and limitations of pyrotechnic distress signals	L	•
4.5.8	Demonstrate safe pyrotechnics activation	P2	•
5	SURVIVAL CRAFT		
5.1	<i>Totally Enclosed Motor Propelled Survival Craft (TEMPSC)</i>		
5.1.1	Describe the importance of the mustering-process	L	•
5.1.2	Identify methods used offshore to perform a headcount during mustering	L	•
5.1.3	Describe why a TEMPSC should be regarded as the primary means of escape in case of water abandonment	L	•
5.1.4	Identify the features of a typical TEMPSC	L	•
5.1.5	Identify different davit systems and launching systems used for TEMPSC (including hook systems)	L	•
5.1.6	Describe the difference between on load and off load release	L	•
5.1.7	Describe the relationship between the self-righting capability of the TEMPSC and the weight-division inside	L	•
5.1.8	Describe the consequences if passengers and equipment in a TEMPSC are not secured	L	•
5.1.9	Identify how a TEMPSC is operated	L	•
5.1.10	Participate during an alarm, mustering, boarding and launching of a TEMPSC as a passenger (possible scenarios could include operating sprinkler, air, MOB-assistance, stretcher transfer)	P2	•
5.2	<i>Life rafts - General</i>		
5.2.1	Describe the different components and features of life rafts and their functionality (including different labels found on the life raft storage container and their importance)	L	•
5.2.2	Describe hydrostatic release of life rafts in case of sinking vessels or structures	L	•
5.2.3	Describe the inventory & equipment found in the life raft	L	•

ID	Competence Statement	Competence Type	BST
5.2.4	Identify the tow-patch on the life raft and explain its importance during life raft marshalling/surface support	L	•
5.2.5	Participate in the righting of a capsized life raft wearing an immersion suit	P2	•
5.2.7	Demonstrate boarding a life raft from the water unassisted while wearing an immersion suit	P2	•
5.2.8	Demonstrate boarding a life raft using the buddy system while wearing representative immersion suits	P2	•
5.2.9	Demonstrate a dry life raft-entry from a ladder or other means of descent while wearing an immersion suit	P2	•
5.2.10	Observe a condition check of a life raft	P3	•
5.2.11	Describe the importance of staying in contact with the life raft's painter line when in the water	L	•
5.2.12	Demonstrate an in water rescue of others while maintaining contact with the life raft	P2	•
5.2.13	Demonstrate survival routines in a life raft	P2	•
5.3	<i>Life rafts -Throw overboard</i>		
5.3.1	Identify the most favorable location to launch a life raft, considering the prevailing conditions (e.g. wind, current)	L	•
5.3.2	Describe how to prepare and deploy a throw overboard type life raft	L	•
5.3.3	Describe the considerations when moving a life raft container	L	•
5.3.4	Participate in deploying a throw overboard type life raft	P2	•
5.4	<i>Life rafts – Davit launched</i>		
5.4.1	Identify davit launched life rafts on deck	L	•
5.4.2	Describe the steps of davit crane operation	L	•
5.4.3	Describe the sequence of actions of launching a davit launched life raft	L	•
5.4.4	Describe the functionality of the different lines connected to the davit launched life raft and its container	L	•
5.4.5	Describe that a davit launched life raft can also be launched as a throw overboard type life raft	L	•
5.4.6	Describe how an offload release hook must be operated during a launch	L	•
5.4.7	Describe the actions and precautions to be taken prior to releasing the remote winch-brake from the life raft	L	•
5.4.8	Participate in the launching procedures of a davit-launched life raft	P2	•
6	SEARCH & RESCUE		
6.1	<i>SAR-organization</i>		
6.1.1	Describe the structure of the SAR-organization in Canadian waters	L	•
6.1.2	Describe the available SAR-resources for Canadian waters (i.e. mutual aid, Automated Merchant Vessel Emergency Reporting System, etc.) including description of the operator provided SAR program (SBV, HELO)	L	•

ID	Competence Statement	Competence Type	BST
6.2	<i>The rescue</i>		
6.2.1	Identify which information is essential to provide to the SAR-organization in case of an abandonment	L	•
6.2.2	Identify likely methods of rescue following an emergency in Canadian waters	L	•
6.2.3	Describe the personal preparations to be made before a rescue	L	•
6.2.4	Describe the preparations to be made to the survival craft before a rescue	L	•
6.2.5	Describe limitations of SAR-resources and their need for prioritizing (i.e. discussion on SAR resources and how it applies to an offshore emergency rescue)	L	•
6.2.6	Describe safety considerations by SAR-units during a rescue and possible delays due to conditions	L	•
6.2.7	Describe the search and rescue equipment available on SAR-helicopters	L	•
6.2.8	Describe the points of attention when being rescued by helicopter equipment (i.e. hoist, frame)	L	•
6.2.9	Demonstrate the correct procedure for rescue by helicopter (i.e. hoist, frame)	P2	•
6.2.10	Describe how SKAD-deployment may be used during a rescue. (SKAD = Survival Kit Air Droppable)	L	•
6.2.11	Describe the rescue equipment available on offshore installations and standby vessels	L	•
6.2.12	Identify the points of attention when being rescued by a fast rescue boat	L	•
6.2.13	Observe the proper behavior while being rescued by a fast rescue boat with the use of a rescue frame / net	P3	•
6.2.14	Observe alternate systems for retrieval (i.e. of healthy individuals) from a life raft or fast rescue boat	P3	•
6.2.15	Demonstrate a transfer from a TEMPSC to a Fast Rescue Boat	P2	•
6.2.16	Demonstrate a transfer from a Fast Rescue Boat to a vessel	P2	•
6.2.17	Demonstrate a self-rescue from the water to a safe area using a scramble-net or rope ladder (embarkation, pilot or Jacobs)	P2	•

11.6 Table 3 - COMPETENCE TABLE – Basic Survival Training - Recurrent (BST-R)

NOTE: the ID numbering relates to Table 1 which lists all three survival training courses; therefore, some numbers may not appear in the table below.

ID	Competence Statement	Competence Type	BST-R
1	WORKING OFFSHORE		
1.2	<i>Managing risks</i>		
1.2.1	Describe the most common hazards and emergencies associated with working offshore	L	•
1.2.2	Describe the safety organization / structure on board an installation	L	•
2	HELICOPTER SAFETY & EMERGENCY PROCEDURES		
2.1	<i>Helicopter operations</i>		
2.1.1	Identify the most critical phases in helicopter flight operations	L	•
2.1.6	Describe the features of the helicopter passenger transportation suit systems	L	•
2.1.7	Perform the donning of a representative helicopter passenger transportation suit system (i.e. importance of proper fit; storage considerations; burping, etc.)	P1	•
2.1.8	Identify the available Personal Protective Equipment used during helicopter transfer	L	•
2.1.9	Demonstrate correctly strapping in a four point harness, avoiding HUEBA-entanglement and incorrect buckle-position	P2	•
2.1.10	Describe the importance of wearing the harness during all phases of the flight	L	•
2.2	<i>Helicopter emergency procedures</i>		
2.2.1	Describe the rationale for Helicopter Underwater Egress Training (HUET)	L	•
2.2.2	Identify various forms of emergency landings (on land and water)	L	•
2.2.3	Identify the announcement to prepare for an emergency landing	L	•
2.2.4	Describe the purpose of securing loose items and the brace position during an emergency landing	L	•
2.2.5	Demonstrate the sequence of actions to prepare for an emergency landing on water, including getting watertight while secured in a four point harness	P2	•
2.2.6	Demonstrate the use of available personal safety equipment on board the helicopter	P2	•
2.2.7	Demonstrate the brace-position while secured in a four point harness and outfitted with a HUEBA	P2	•
2.2.8	Demonstrate a thorough orientation of the helicopter interior (primary/secondary exits, other passengers, reference points)	P2	•
2.2.9	Describe the possible consequences and considerations for emergency evacuation / egress if a helicopter is outfitted with stroking seats	L	•
2.2.10	Demonstrate preparing an escape window and emergency exit in accordance with the flight safety card and available instructions	P2	•
2.2.11	Describe when to prepare an escape window and when to actually jettison the window	L	•

ID	Competence Statement	Competence Type	BST-R
2.2.12	Describe the risks and points of attention of evacuating an upright helicopter	L	•
2.2.13	Describe the sequence of actions when evacuating an upright helicopter after a controlled surface landing	L	•
2.2.14	Describe the importance of remaining strapped in during a surface evacuation until instructed / ready to exit	L	•
2.3	Helicopter emergency equipment		
2.3.1	Describe marine-related safety features available on offshore helicopters	L	•
2.3.2	Identify available emergency equipment and exits and their operation	L	•
2.3.3	Identify the major components of an aviation raft	L	•
2.3.4	Describe the differences between aviation rafts and marine rafts	L	•
2.3.5	Describe the launching procedure for an aviation raft	L	•
2.3.6	Participate in deploying an aviation raft.	P2	•
2.3.7	Demonstrate immediate and subsequent actions in the aviation raft after the helicopter has been abandoned	P2	•
2.3.8	Identify the survival aids available in an aviation raft	L	•
2.4	Helicopter egress		
2.4.1	Describe the importance of waiting with seat belt buckled for rolling motion to stop and helicopter to fill with water before egressing an inverted helicopter	L	•
2.4.2	Identify the advantages of clearing escape windows prior to capsizing.	L	•
2.4.3	Describe the need for equalization of water-pressure before being able to jettison an emergency window under water	L	•
2.4.4	Demonstrate a surface evacuation from an upright HUET into an aviation raft, including exit preparation	P2	•
2.4.5	Demonstrate an inverted underwater egress from the HUET while seated next to an already open representative emergency exit / push-out escape window requiring exit / window to be jettisoned on impact	P2	•
2.4.6	Perform an unassisted inverted underwater egress from the HUET, while seated next to a closed representative push-out escape window, requiring the window to be jettisoned underwater	P1	•
2.4.7	Demonstrate the same egress as 2.4.6 from the opposite side of the HUET (demonstrate either 2.4.6 or 2.4.7 from a fully stroked seat position)	P2	•
2.4.8	Demonstrate an inverted underwater egress from a seat not located immediately next to an already open representative emergency exit / push-out escape window	P2	•
2.4.9	Demonstrate when and how to activate the passenger transport suit buoyance system, including the use of available protective features (e.g. spray shield, gloves)	P2	•
2.4.10	Describe underwater egress considerations with respect to the presence of an auxiliary fuel tank	L	•
2.5	Helicopter Underwater Emergency Breathing Apparatus (HUEBA)		
2.5.3	Describe the hazards related to using compressed air under water and importance of continuous exhaling during underwater ascent	L	•

ID	Competence Statement	Competence Type	BST-R
2.5.4	Describe the procedure for using the HUEBA	L	•
2.5.5	Demonstrate a pre-flight inspection of HUEBA	P2	•
2.5.6	Identify potential HUEBA malfunctions	L	•
2.5.7	Identify if a HUEBA is in the open or closed position and fully charged	L	•
2.5.8	Describe the steps involved in initiating the use of the HUEBA while still above the surface	L	•
2.5.9	Describe the steps involved in initiating the use of the HUEBA when submerged	L	•
2.5.10	Demonstrate carrying out breathing actions using HUEBA in a dry environment	P2	•
2.5.11	Demonstrate the deployment of a HUEBA in water	P2	•
2.5.12	Demonstrate clearing the second stage using the purge button in water	P2	•
2.5.13	Demonstrate clearing the second stage using the blast method (through exhaling) in water	P2	•
2.5.14	Demonstrate breathing HUEBA bottle to empty in water	P2	•
2.5.15	Demonstrate the correct use of a HUEBA while seated in an inverted, submerged situation (surface water)	P2	•
3	FIRE SAFETY		
3.1	<i>Prevention, detection and control of fire</i>		
3.1.4	Describe the proper sequence of actions after detecting a fire	L	•
3.2	<i>Fire response</i>		
3.2.2	Demonstrate extinguishing a Class B fire using an appropriate handheld extinguisher, demonstrating correct procedure and safe angle of attack	P2	•
3.4	<i>Personal escape devices</i>		
3.4.2	Demonstrate an escape using a smoke-hood from a low visibility environment while demonstrating the proper technique and establishing reference points	P2	•
4	ABANDONMENT & SURVIVAL		
4.1	<i>Emergency preparedness & response</i>		
4.1.5	Describe various roles and responsibilities in abandonment situations (including mustering)	L	•
4.2	<i>Enemies of survival</i>		
4.2.2	Identify threats to, survival, including the physical and mental enemies,	L	•
4.2.3	Describe prioritized actions to reduce threats to survival	L	•
4.3	<i>Personal flotation Apparatus</i>		
4.3.5	Observe the use of a lifebuoy including deployment, casualty in-water actions and casualty recovery	P3	•
4.3.6	Perform donning a representative immersion suit	P1	•
4.3.7	Demonstrate in-water behaviour while wearing a representative immersion suit	P2	•

ID	Competence Statement	Competence Type	BST-R
4.4	Abandonment		
4.4.1	Describe the methods of abandonment which could be available for an emergency evacuation under controlled circumstances	L	•
4.4.2	Describe the primary/preferred methods of abandonment under controlled circumstances in case of a developing emergency	L	•
4.4.3	Identify the secondary equipment available for abandonment	L	•
4.4.4	Identify the tertiary equipment available for abandonment	L	•
4.4.5	Describe how to use a Donut escape device	L	•
4.4.7	Demonstrate a descent using escape chute	P2	•
4.4.8	Demonstrate a controlled water entry	P2	•
4.4.9	Demonstrate the use of a rope ladder (embarkation, pilot or Jacobs)	P2	•
4.4.10	Describe the in-water group formations and their importance	L	•
4.4.11	Describe in-water positions intended to reduce heat loss	L	•
4.4.12	Demonstrate in-water group survival formations	P2	•
4.4.13	Demonstrate swimming formations	P2	•
4.4.14	Demonstrate proper step-off technique from a minimum height of 1 meter	P2	•
4.4.15	Participate in an evacuation at sea, making use of available lifesaving equipment	P2	•
4.5	Distress signals		
4.5.1	Identify the electronic, audible and visual distress signals available offshore	L	•
4.5.2	Describe the working principles of an EPIRB, SART and PLB	L	•
4.5.3	Identify the VHF radio emergency channel	L	•
4.5.4	Observe the basic use of a VHF radio	P3	•
4.5.5	Describe the use of a heliograph	L	•
4.5.6	Describe the quantity of pyrotechnics available in the inventory of a survival craft and when to use each type	L	•
4.5.7	Describe the working principle, points of attention and limitations of pyrotechnic distress signals	L	•
4.5.9	Observe demonstration of safe pyrotechnics activation	P3	•
5	SURVIVAL CRAFT		
5.1	Totally Enclosed Motor Propelled Survival Craft (TEMPSC)		
5.1.4	Identify the features of a typical TEMPSC	L	•
5.1.5	Identify different davit systems and launching systems used for TEMPSC (including hook systems)	L	•
5.1.6	Describe the difference between on load and off load release	L	•

ID	Competence Statement	Competence Type	BST-R
5.1.7	Describe the relationship between the self-righting capability of the TEMPSC and the weight-division inside	L	•
5.1.8	Describe the consequences if passengers and equipment in a TEMPSC are not secured	L	•
5.1.9	Identify how a TEMPSC is operated	L	•
5.1.10	Participate during an alarm, mustering, boarding and launching of a TEMPSC as a passenger (possible scenarios could include operating sprinkler, air, MOB-assistance, stretcher transfer)	P2	•
5.2	<i>Life rafts - General</i>		
5.2.1	Describe the different components and features of life rafts and their functionality (including different labels found on the life raft storage container and their importance)	L	•
5.2.2	Describe hydrostatic release of life rafts in case of sinking vessels or structures	L	•
5.2.3	Describe the inventory & equipment found in the life raft	L	•
5.2.4	Identify the tow-patch on the life raft and explain its importance during life raft marshalling/surface support	L	•
5.2.6	Observe the procedure for righting of a capsized life raft with demonstrator wearing a representative immersion suit	P3	•
5.2.7	Demonstrate boarding a life raft from the water unassisted while wearing an immersion suit	P2	•
5.2.8	Demonstrate boarding a life raft using the buddy system while wearing representative immersion suits	P2	•
5.2.9	Demonstrate a dry life raft-entry from a ladder or other means of descent while wearing an immersion suit	P2	•
5.2.10	Observe a condition check of a life raft	P3	•
5.2.11	Describe the importance of staying in contact with the life raft's painter line when in the water	L	•
5.2.12	Demonstrate an in water rescue of others while maintaining contact with the life raft	P2	•
5.2.13	Demonstrate survival routines in a life raft	P2	•
5.3	<i>Life rafts - Throw overboard</i>		
5.3.1	Identify the most favorable location to launch a life raft, considering the prevailing conditions (e.g. wind, current)	L	•
5.3.3	Describe the considerations when moving a life raft container	L	•
5.3.4	Participate in deploying a throw overboard type life raft	P2	•
5.4	<i>Life rafts – Davit launched</i>		
5.4.1	Identify davit launched life rafts on deck	L	•
5.4.3	Describe the sequence of actions of launching a davit launched life raft	L	•
5.4.4	Describe the functionality of the different lines connected to the davit launched life raft and its container	L	•
5.4.5	Describe that a davit launched life raft can also be launched as a throw overboard type life raft	L	•
5.4.6	Describe how an offload release hook must be operated during a launch	L	•

ID	Competence Statement	Competence Type	BST-R
5.4.7	Describe the actions and precautions to be taken prior to releasing the remote winch-brake from the life raft	L	•
5.4.8	Participate in the launching procedures of a davit-launched life raft	P2	•
6	SEARCH & RESCUE		
6.1	<i>SAR-organization</i>		
6.1.1	Describe the structure of the SAR-organization in Canadian waters	L	•
6.1.2	Describe the available SAR-resources for Canadian waters (i.e. mutual aid, Automated Merchant Vessel Emergency Reporting System, etc.) including description of the operator provided SAR program (SBV, HELO)	L	•
6.2	<i>The rescue</i>		
6.2.2	Identify likely methods of rescue following an emergency in Canadian waters	L	•
6.2.3	Describe the personal preparations to be made before a rescue	L	•
6.2.4	Describe the preparations to be made to the survival craft before a rescue	L	•
6.2.7	Describe the search and rescue equipment available on SAR-helicopters	L	•
6.2.10	Describe how SKAD-deployment may be used during a rescue. (SKAD = Survival Kit Air Droppable)	L	•
6.2.11	Describe the rescue equipment available on offshore installations and standby vessels	L	•
6.2.12	Identify the points of attention when being rescued by a fast rescue boat	L	•
6.2.13	Observe the proper behavior while being rescued by a fast rescue boat with the use of a rescue frame / net	P3	•
6.2.15	Demonstrate a transfer from a TEMPSC to a Fast Rescue Boat	P2	•
6.2.16	Demonstrate a transfer from a Fast Rescue Boat to a vessel	P2	•
6.2.17	Demonstrate a self-rescue from the water to a safe area using a scramble-net or rope ladder (embarkation, pilot or Jacobs)	P2	•

11.7 Table 4 - COMPETENCE TABLE – Offshore Survival Introduction (OSI)

NOTE: the ID numbering relates to Table 1 which lists all three survival training courses; therefore, some numbers may not appear in the table below.

ID	Competence Statement	Competence Type	OSI
1	WORKING OFFSHORE		
1.2	Managing risks		
1.2.1	Describe the most common hazards and emergencies associated with working offshore	L	•
1.3	Personnel transfer		
1.3.1	Describe the personnel transfer devices primarily used in Canadian waters, including appropriate timing for stepping on or off if appropriate	L	•
2	HELICOPTER SAFETY & EMERGENCY PROCEDURES		
2.1	Helicopter operations		
2.1.1	Identify the most critical phases in helicopter flight operations	L	•
2.1.3	Describe pre-flight suit-up procedures and checks.	L	•
2.1.4	Describe the boarding and disembarking procedures	L	•
2.1.5	Describe the check-in procedure and applicable restrictions (e.g. ID, medical, luggage, forbidden items)	L	•
2.1.6	Describe the features of the helicopter passenger transportation suit systems	L	•
2.1.7	Perform the donning of a representative helicopter passenger transportation suit system (i.e. importance of proper fit; storage considerations; burping, etc.)	P1	•
2.1.8	Identify the available Personal Protective Equipment used during helicopter transfer	L	•
2.1.9	Demonstrate correctly strapping in a four point harness, avoiding HUEBA-entanglement and incorrect buckle-position	P2	•
2.1.10	Describe the importance of wearing the harness during all phases of the flight	L	•
2.2	Helicopter emergency procedures		
2.2.1	Describe the rationale for Helicopter Underwater Egress Training (HUET)	L	•
2.2.2	Identify various forms of emergency landings (on land and water)	L	•
2.2.3	Identify the announcement to prepare for an emergency landing	L	•
2.2.4	Describe the purpose of securing loose items and the brace position during an emergency landing	L	•
2.2.5	Demonstrate the sequence of actions to prepare for an emergency landing on water, including getting watertight while secured in a four point harness	P2	•
2.2.6	Demonstrate the use of available personal safety equipment on board the helicopter	P2	•
2.2.7	Demonstrate the brace-position while secured in a four point harness and outfitted with a HUEBA	P2	•
2.2.8	Demonstrate a thorough orientation of the helicopter interior (primary/secondary exits, other passengers, reference points)	P2	•

ID	Competence Statement	Competence Type	OSI
2.2.9	Describe the possible consequences and considerations for emergency evacuation / egress if a helicopter is outfitted with stroking seats	L	•
2.2.10	Demonstrate preparing an escape window and emergency exit in accordance with the flight safety card and available instructions	P2	•
2.2.11	Describe when to prepare an escape window and when to actually jettison the window	L	•
2.2.12	Describe the risks and points of attention of evacuating an upright helicopter	L	•
2.2.13	Describe the sequence of actions when evacuating an upright helicopter after a controlled surface landing	L	•
2.2.14	Describe the importance of remaining strapped in during a surface evacuation until instructed / ready to exit	L	•
2.3	Helicopter emergency equipment		
2.3.1	Describe marine-related safety features available on offshore helicopters	L	•
2.3.2	Identify available emergency equipment and exits and their operation	L	•
2.4	Helicopter egress		
2.4.1	Describe the importance of waiting with seat belt buckled for rolling motion to stop and helicopter to fill with water before egressing an inverted helicopter	L	•
2.4.2	Identify the advantages of clearing escape windows prior to capsize.	L	•
2.4.3	Describe the need for equalization of water-pressure before being able to jettison an emergency window under water	L	•
2.4.4	Demonstrate a surface evacuation from an upright HUET into an aviation raft, including exit preparation	P2	•
2.4.5	Demonstrate an inverted underwater egress from the HUET while seated next to an already open representative emergency exit / push-out escape window requiring exit / window to be jettisoned on impact	P2	•
2.4.6	Perform an unassisted inverted underwater egress from the HUET, while seated next to a closed representative push-out escape window, requiring the window to be jettisoned underwater	P1	•
2.4.7	Demonstrate the same egress as 2.4.6 from the opposite side of the HUET (demonstrate either 2.4.6 or 2.4.7 from a fully stroked seat position)	P2	•
2.4.8	Demonstrate an inverted underwater egress from a seat not located immediately next to an already open representative emergency exit / push-out escape window	P2	•
2.4.9	Demonstrate when and how to activate the passenger transport suit buoyance system, including the use of available protective features (e.g. spray shield, gloves)	P2	•
2.4.10	Describe underwater egress considerations with respect to the presence of an auxiliary fuel tank	L	•
2.5	Helicopter Underwater Emergency Breathing Apparatus (HUEBA)		
2.5.1	Describe the rationale for using a compressed air helicopter underwater emergency breathing apparatus (HUEBA)	L	•
2.5.2	Describe the components, specifications and limitations of the HUEBA	L	•
2.5.3	Describe the hazards related to using compressed air under water and importance of continuous exhaling during underwater ascent	L	•

ID	Competence Statement	Competence Type	OSI
2.5.4	Describe the procedure for using the HUEBA	L	•
2.5.5	Demonstrate a pre-flight inspection of HUEBA	P2	•
2.5.6	Identify potential HUEBA malfunctions	L	•
2.5.7	Identify if a HUEBA is in the open or closed position and fully charged	L	•
2.5.8	Describe the steps involved in initiating the use of the HUEBA while still above the surface	L	•
2.5.9	Describe the steps involved in initiating the use of the HUEBA when submerged	L	•
2.5.10	Demonstrate carrying out breathing actions using HUEBA in a dry environment	P2	•
2.5.11	Demonstrate the deployment of a HUEBA in water	P2	•
2.5.12	Demonstrate clearing the second stage using the purge button in water	P2	•
2.5.13	Demonstrate clearing the second stage using the blast method (through exhaling) in water	P2	•
2.5.14	Demonstrate breathing HUEBA bottle to empty in water	P2	•
2.5.15	Demonstrate the correct use of a HUEBA while seated in an inverted, submerged situation (surface water)	P2	•
3	FIRE SAFETY		
3.1	<i>Prevention, detection and control of fire</i>		
3.1.4	Describe the proper sequence of actions after detecting a fire	L	•
3.4	<i>Personal escape devices</i>		
3.4.1	Describe how to use a smoke-hood	L	•
3.4.3	Describe how to use an Emergency Escape Breathing Device (EEBD)	L	•
4	ABANDONMENT & SURVIVAL		
4.1	<i>Emergency preparedness & response</i>		
4.1.1	Describe personal measures to take in order to be prepared for an emergency	L	•
4.1.2	Describe the contents of a station bill	L	•
4.1.3	Identify various alarms and status lights on the installation	L	•
4.1.4	Describe the general actions taking place on an installation during an emergency	L	•
4.1.5	Describe various roles and responsibilities in abandonment situations (including mustering)	L	•
4.2	<i>Enemies of survival</i>		
4.2.1	Identify the various human responses which can be expected under stress or in emergencies	L	•
4.2.2	Identify threats to, survival, including the physical and mental enemies,	L	•
4.2.3	Describe prioritized actions to reduce threats to survival	L	•

ID	Competence Statement	Competence Type	OSI
4.2.4	Describe factors which influence survival time	L	•
4.3	<i>Personal flotation Apparatus</i>		
4.3.1	Describe the importance, working characteristics and limitations of personal flotation apparatus with regards to buoyancy, thermal protection and self-righting capabilities (i.e. proper fit)	L	•
4.3.6	Perform donning a representative immersion suit	P1	•
4.3.7	Demonstrate in-water behaviour while wearing a representative immersion suit	P2	•
4.4	<i>Abandonment</i>		
4.4.1	Describe the methods of abandonment which could be available for an emergency evacuation under controlled circumstances	L	•
4.4.2	Describe the primary/preferred methods of abandonment under controlled circumstances in case of a developing emergency	L	•
4.4.3	Identify the secondary equipment available for abandonment	L	•
4.4.4	Identify the tertiary equipment available for abandonment	L	•
4.4.7	Demonstrate a descent using escape chute	P2	•
4.4.8	Demonstrate a controlled water entry	P2	•
4.4.9	Demonstrate the use of a rope ladder (embarkation, pilot or Jacobs)	P2	•
4.5	<i>Distress signals</i>		
4.5.1	Identify the electronic, audible and visual distress signals available offshore	L	•
4.5.7	Describe the working principle, points of attention and limitations of pyrotechnic distress signals	L	•
5	SURVIVAL CRAFT		
5.1	<i>Totally Enclosed Motor Propelled Survival Craft (TEMPSC)</i>		
5.1.1	Describe the importance of the mustering-process	L	•
5.1.2	Identify methods used offshore to perform a headcount during mustering	L	•
5.1.3	Describe why a TEMPSC should be regarded as the primary means of escape in case of water abandonment	L	•
5.1.4	Identify the features of a typical TEMPSC	L	•
5.1.5	Identify different davit systems and launching systems used for TEMPSC (including hook systems)	L	•
6	SEARCH & RESCUE		
6.2	<i>The rescue</i>		
6.2.2	Identify likely methods of rescue following an emergency in Canadian waters	L	•
6.2.3	Describe the personal preparations to be made before a rescue	L	•