

***Atlantic Canada Offshore Petroleum Training and  
Qualifications Committee***

STANDARD PRACTICE

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**Atlantic Canada Offshore  
Petroleum Standard Practice  
for the Training and  
Qualifications of Offshore  
Personnel**

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April, 2020

The Atlantic Canada Offshore Petroleum Training and Qualifications Committee (TQC) was formed as a collaborative, multi-stakeholder committee by the regulatory authorities, offshore petroleum industry operators and drilling contractors to meet the intentions set out in the *Accord Acts* for an Offshore Oil and Gas Training Standards Advisory Board.

The objectives of the TQC are to support and oversee the development of an offshore Atlantic Canada training standard that outlines the minimum qualifications and certified training required of individuals working in Atlantic Canada's offshore petroleum industry.

Review by 2021

#### **Disclaimer**

This publication was prepared by the Atlantic Canada Offshore Petroleum Training and Qualifications Committee (TQC), and published by the Canadian Association of Petroleum Producers (CAPP) on behalf of the TQC. While it is believed that the information contained herein is reliable under the conditions and subject to the limitations set out, CAPP does not guarantee its accuracy. The use of this report or any information contained will be at the user's sole risk, regardless of any fault or negligence of CAPP, its co-funders or the TQC.

## **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 2.7);
- 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.

This Standard Practice is updated and re-published, at a minimum 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.

Editorial changes that do not require review and ratification are made and published as necessary on an ongoing basis.

## 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: <a href="#">CNSOPB</a> ) and the Canada-Newfoundland and Labrador Offshore Petroleum Board (link: <a href="#">C-NLOPB</a> )
Operator	Means a person who holds an authorization.
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 2.7)
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) includes two offshore workforce representatives as voting members of the committee. The TQC also 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 TQC will endeavour to send a Change Request summary to the Joint OH&S Committees at least 45 days prior to ratification. 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 endeavors to provide feedback to the OH&S Committees that provide comments.

### **1.6 Accreditation**

Neither the TQC nor 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)
- Survival Craft Coxswain
- Hazardous Area Equipment Training

### **1.8 In-House or Third Party Training**

The Offshore Petroleum Boards 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.

### **1.9 Use of Simulation Technology**

The Atlantic Canada Training and Qualifications Committee (TQC) acknowledges the value of the use of simulation in training and provides the following references as guidance for evaluating simulation applications in the offshore petroleum industry in Atlantic Canada.

- Standards of Training, Certification & Watchkeeping (STCW) A-I/6 Training and Assessment
- Standards of Training, Certification & Watchkeeping (STCW) A-I/12 Performance Standards
- International Marine Contractors Association (IMCA) "Guidance on the Use of Simulators (IMCA C 014 Rev. 1)
- DNV Standard for Certification No. 2.14 Maritime Simulator Systems, January 2011

### **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 and notes the medicals accepted from other jurisdictions including the United Kingdom and Norwegian medicals.

*Note: for some training courses listed within this Standard Practice there is a medical assessment pre-requisite. It is advised that individuals contact their employer or operator 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 1004, Scotia Centre, 235 Water Street, St. John's, NL A1C 1B6 or by email to [atlantic.communication@capp.ca](mailto: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).....	9
2.3	Aircrew Survival Training – (AST).....	11
2.4	Hydrogen Sulphide (H <sub>2</sub> S) .....	12
2.5	Helicopter/Vessel Safety Briefing .....	13
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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.

### **Course Duration**

Five (5) days

### **Prerequisites**

A Current Medical Certificate as per CAPP's Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide.

*Note: Personnel entering the jurisdiction with a current OPITO approved "Basic Offshore Safety Induction & Emergency Training" (BOSIET) certificate or a Norwegian Oil and Gas Association approved "Basic Safety and Emergency Training" certificate, will be required to have a valid medical including the five additional compressed air medical screening questions administered by a recognized physician as per the CAPP Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide prior to completing the BST-R. This 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 a Norwegian Oil and Gas Association approved courses will be considered valid for a period of three (3) years from its date of issue.*

### **Renewal**

Three (3) years

### **Course Content**

Refer to the following sections:

11.4 Table 1 BST competencies

11.5 Equipment Requirements

### **Recognized Certificates**

- Basic Survival Training (BST) HUEBA\HUET Certificate issued by the Marine Institute, St. John's, Newfoundland and Labrador.
- Basic Survival Training (BST) HUEBA\HUET issued by Survival Systems Training Ltd., Dartmouth, Nova Scotia.



- Basic Survival Training (BST) HUEBA\HUET issued by RelyonNutec, Dartmouth, Nova Scotia.
- Basic Survival Training (BST) HUEBA\HUET issued by RelyonNutec Canada, Newfoundland and Labrador.

*Note: For trainees who are not medically cleared to use the HUEBA device in the HUET and have a valid medical, the trainee must be “red tagged” by the training provider and permitted to complete the training without use of the HUEBA in the HUET. Upon successful completion of the training, the trainee will be issued the relevant certificate.*

*Note: Maximum number of class size for the BST, BST-R and OSI is 16 participants.*

*Combining any of the BST, BST-R or OSI practical exercises is permitted as long as the Training Provider does not exceed the maximum number of 16 participants.*

## **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 the 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 Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide
- A valid Basic Survival Training (BST) Certificate; or
- A valid OPITO approved "Basic Offshore Safety Induction and Emergency Training" (BOSIET) or "Further Offshore Emergency Training" (FOET) certificate; or
- A valid Norwegian Oil and Gas Association approved "Basic Safety and Emergency Preparedness course" certificate or a "Basic Safety and Emergency Preparedness Refresher Course" certificate.

*Note: Personnel entering the jurisdiction with a current OPITO approved "Basic Offshore Safety Induction & Emergency Training" (BOSIET) certificate or a Norwegian Oil and Gas Association approved "Basic Safety and Emergency Training" certificate, will be required to have a valid medical including the five additional compressed air medical screening questions administered by a recognized physician as per the CAPP Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide prior to*

*completing the BST-R. This 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 Norwegian Oil and Gas Association 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 11.4 Table 1: BST-R competencies

### **Recognized Certificates**

- Basic Survival Training (Recurrent) (BST-R) HUEBA\HUET Certificate issued by the Marine Institute, St. John's, Newfoundland and Labrador.
- Basic Survival Training (Recurrent) (BST-R) HUEBA\HUET issued by Survival Systems Training Ltd., Dartmouth, Nova Scotia.
- Basic Survival Training (Recurrent) (BST-R) HUEBA\HUET issued by RelyonNutec, Dartmouth, Nova Scotia.
- Basic Survival Training (Recurrent) (BST-R) HUEBA\HUET issued by RelyonNutec, Newfoundland and Labrador.

*Note: For trainees who are not medically cleared to use the HUEBA in HUET and have a valid medical, the trainee must be "red tagged" by the training provider and permitted to complete the training without use of the HUEBA in the HUET. Upon successful completion of the training, the trainee will be issued the relevant certificate.*

*Note: Maximum number of class size for the BST, BST-R and OSI is 16 participants.*

*Combining any of the BST, BST-R or OSI practical exercises is permitted as long as the Training Provider does not exceed the maximum number of 16 participants.*

## **2.3 Aircrew Survival Training – (AST)**

### **Course Objectives**

To provide 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. The AST course consists of one day of aircrew ditching training and one day of offshore hazards and sea survival training. The offshore hazards and sea survival day follows the same criteria as the BST-R whereas the ditching day theory and practical exercises have been developed explicitly for both Line and SAR pilots; Rescue Specialists, and Aircraft Maintenance Engineers who are required to fly as part of their job duties.

### **Applies To**

Line and SAR pilots; Rescue Specialists, and Aircraft Maintenance Engineers.

### **Course Duration**

Two (2) days.

### **Prerequisites**

A Current Medical Certificate as per CAPP's Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide.

### **Renewal**

Three (3) years.

### **Course Content**

Refer to Section 11.8 Table 1 Competence for AST

*Note: "Individuals with an AST must remain within the accommodations unless escorted."*

## **2.4 Hydrogen Sulphide (H<sub>2</sub>S)**

### **Course Objectives**

To provide personnel with an awareness of the dangers associated with hydrogen sulphide (H<sub>2</sub>S) 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 H<sub>2</sub>S
- Symptoms of H<sub>2</sub>S poisoning
- Exposure limits and toxicity levels
- Methods of detecting and monitoring H<sub>2</sub>S
- Operation and maintenance of breathing apparatus
- Response strategy
- Rescue techniques
- Resuscitation

### **Recognized Certificates**

- H<sub>2</sub>S Alive Certificate issued by Energy Safety Canada or a certified instructor in possession of a valid Energy Safety Canada Instructor's Training Agreement.

## **2.5 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.

## **2.6 Installation Safety Induction**

The Installation Safety Induction should be designed to familiarize every person at the installation, including visitors, 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
- the demonstration of marine abandonment suits.

## **2.7 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 2.5 and 2.6 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 administered by a Recognized Physician as per CAPP’s Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide

### **Renewal**

One (1) year

### **Course Content**

Refer to Section 11.4 Table 1 Competence for OSI

### **Recognized Certificates**

- Offshore Survival Introduction with HUET-HUEBA certificate issued by the Marine Institute, St. John’s, Newfoundland and Labrador.
- Offshore Survival Introduction certificate with HUET-HUEBA issued by Survival Systems Training Ltd., Dartmouth, Nova Scotia.
- Offshore Survival Introduction with HUET-HUEBA certificate issued by RelyonNutec, Dartmouth, Nova Scotia.
- Offshore Survival Introduction with HUET-HUEBA certificate issued by RelyonNutec, Newfoundland and Labrador.

*Note: For trainees who are not medically cleared to use the HUEBA in HUET and have a valid medical, the trainee must be “red tagged” by the training provider and permitted to complete the training without use of the HUEBA in the HUET. Upon successful completion of the training, the trainee will be issued the relevant certificate.*



*Note: Maximum number of class size for the BST, BST-R and OSI is 16 participants.*

*Combining any of the BST, BST-R or OSI practical exercises is permitted as long as the Training Provider does not exceed the maximum number of 16 participants.*

## **2.8 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 Offshore Petroleum Boards 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; and
- An explanation of the “Regulatory Query” process.

## **2.9 Role-Specific Orientation**

A Role-Specific 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 role-specific 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.

## 2.10 Security Training

Installation security in the offshore area of operations is a key element in the protection of personnel, the environment, and equipment. It is essential that all operators in the Newfoundland and Labrador and Nova Scotia offshore areas conduct comprehensive security vulnerability assessments, maintain effective Security Plans and identify personnel that have security responsibilities.

Operators should ensure that personnel are provided with the required security training described below.

Operators should further ensure that drills and exercises are conducted at planned intervals to practice Security Contingency and Emergency Response Plans.

**Note 1:** Operators must also be aware that there may be additional security training, drills and exercise requirements associated with, as applicable, the International Ship & Port Facility Security (ISPS) Code, the Code on the Standards of Training, Certification and Watchkeeping for Seafarers (STCW Code including the Manila Amendments to STCW Convention and Code, dated 25 June 2010), as well as any additional requirements of the Installation's Flag State. Installations are also to take note of the requirements for security training in IMO Resolution A.1079 (28) adopted on 4 Dec 2013.

**Note 2:** For Installations operating in the Newfoundland and Labrador Offshore area, Operators must also take into account the "Requirements Respecting the Security of Offshore Facilities", published by the Canada-Newfoundland & Labrador Offshore Petroleum Board (C-NLOPB).

### 2.10.1 Security Training for Installation Security Officer

#### Course Objectives

To provide personnel with the knowledge and skills necessary to fulfill their responsibilities within the Installation Security Plan.

#### Applies To

Persons who have responsibilities respecting the security of an offshore installation.

#### Recognized Certificates, Course and Duration

Courses resulting in a Certificate of Proficiency (CoP) for "Seafarers with Designated Security Responsibilities" issued in accordance with IMO STCW Code Regulation VI/6 and Table A-VI/6-2. This includes courses resulting in a CoP for "Vessel Personnel with

Security Responsibilities” recognised by Transport Canada in accordance with the Marine Transportation Security Regulations, (normally minimum one and a half days duration). A CoP is not issued for personnel on fixed installations; therefore, a valid certificate from a recognised training institute, or equivalent is required.

### **Prerequisites**

None

### **Renewal**

No expiry; refresher training recommended for persons who have not been actively involved in security drills and exercises for a period of 5 years.

### **Course Content**

- (a) Current security threats and patterns;
- (b) The detection and recognition of weapons, explosives, incendiaries and other dangerous substances and devices;
- (c) The recognition of the characteristics and behavioural patterns of persons who are likely to threaten security;
- (d) Knowledge of security measures for: Access to the installation, Restricted areas, Handling of cargo, Delivery of stores, Monitoring of the installation, and Handling unaccompanied baggage;
- (e) Techniques that might be used to violate security procedures or to circumvent security procedures, equipment or systems;
- (f) Crowd management and control techniques;
- (g) Security-related communications;
- (h) Emergency preparedness and response and contingency planning;
- (i) The operation, testing, calibration and maintenance of security equipment and systems;
- (j) Inspection, control and monitoring techniques of the offshore installation;
- (k) Methods of performing physical searches of persons and goods including personal effects, baggage, ships’ stores and industrial supplies;
- (l) The relevant provisions of the offshore installation security plan; and
- (m) The meaning and requirements of the different MARSEC levels.

## **2.10.2 Security Training for Installation Personnel with Security Responsibility**

### **Course Objectives**

To provide personnel with the knowledge and skills necessary to fulfill their responsibilities within the Installation Security Plan.

### **Applies To**

Persons who have responsibilities respecting the security of an offshore installation.

### **Recognized Certificates, Course and Duration**

Courses resulting in a Certificate of Proficiency (CoP) for “Seafarers with Designated Security Responsibilities” issued in accordance with IMO STCW Code Regulation VI/6 and Table A-VI/6-2. This includes courses resulting in a CoP for “Vessel Personnel with Security Responsibilities” recognised by Transport Canada in accordance with the Marine Transportation Security Regulations, (normally minimum one and a half days duration). A CoP is not issued for personnel on fixed installations; therefore, a valid certificate from a recognised training institute, or equivalent as per Section 1.9, is required.

### **Prerequisites**

None

### **Renewal**

No expiry; refresher training recommended for persons who have not been actively involved in security drills and exercises for a period of 5 years.

### **Course Content**

- (a) Current security threats and patterns;
- (b) The detection and recognition of weapons, explosives, incendiaries and other dangerous substances and devices;
- (c) The recognition of the characteristics and behavioural patterns of persons who are likely to threaten security;
- (d) Knowledge of security measures for: Access to the installation, Restricted areas, Handling of cargo, Delivery of stores, Monitoring of the installation, and Handling unaccompanied baggage;
- (e) Techniques that might be used to violate security procedures or to circumvent security procedures, equipment or systems;
- (f) Crowd management and control techniques;

- (g) Security-related communications;
- (h) Emergency preparedness and response and contingency planning;
- (i) The operation, testing, calibration and maintenance of security equipment and systems;
- (j) Inspection, control and monitoring techniques of the offshore installation;
- (k) Methods of performing physical searches of persons and goods including personal effects, baggage, ships' stores and industrial supplies;
- (l) The relevant provisions of the offshore installation security plan; and
- (m) The meaning and requirements of the different MARSEC levels.

### **2.10.3 Security Awareness Training for Installation Personnel without Security Responsibilities**

#### **Course Objectives**

To provide personnel with a general understanding of security procedures and arrangements in the offshore installation.

#### **Applies To**

All permanently and regularly assigned personnel.

#### **Recognized Certificates, Course and Duration**

A security awareness briefing shall be completed.

#### **Prerequisites**

None

#### **Renewal**

No expiry; refresher training recommended for persons who have not been actively involved in security drills and exercises for a period of 3 years.

#### **Course Content**

- (a) Basic security issues and communications;
- (b) The meaning of the different MARSEC levels, the different procedures required of the person at each level and the emergency procedures and contingency plans;
- (c) Knowledge of security measures for: Access to the installation, Restricted areas, Handling of cargo, Delivery of stores, Monitoring of the installation, and Handling unaccompanied baggage;

- (d) The detection and recognition of weapons, explosives and incendiaries and other dangerous substances and devices;
- (e) The recognition of the characteristics and behavioural patterns of persons who are likely to threaten security; and
- (f) Techniques that might be used to violate security procedures, or to circumvent security procedures, equipment, or systems.

#### **2.10.4 Offshore Security Orientation**

All persons traveling to an offshore installation, including contractors, should receive security orientation in order to be able to:

- (a) Understand the meaning and requirements of the installation's security; operating level (MARSEC, or other scheme deployed by the operator);
- (b) Report a security incident;
- (c) Know the procedures to follow when there is a security threat; and
- (d) Take part in security-related emergency and contingency procedures.



## **2.11 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

Health Canada: <http://www.hc-sc.gc.ca/ewh-semt/occup-travail/whmis-simdut/ghs-sgh/index-eng.php>

Canadian Centre for Occupational Health and Safety:  
[http://www.ccohs.ca/oshanswers/chemicals/whmis\\_ghs/general.html#\\_1\\_6](http://www.ccohs.ca/oshanswers/chemicals/whmis_ghs/general.html#_1_6)

### 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.

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

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### **3.1 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:

#### **3.1.1 Deputy Person-In-Charge**

A Deputy/Alternate Person-In-Charge should be available onboard the installation at all times and be prepared to take command in an emergency situation should the OIM be unable to assume the duties of his/her role. This individual must hold a senior position onboard the installation, be trained in Management of Major Emergencies, and must have a current and valid Person-In-Charge Assessment.

The Deputy Person in Charge must have Well Control Training Level 2 with recertification every 2 years.

#### **3.1.2 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.

### **3.1.3 Fire Teams**

#### **Role**

To provide coordinated firefighting 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.

### **3.1.4 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. All team members must have an advanced level of first aid training.

### **3.1.5 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 firefighting and rescue duties.

#### **Composition**

Helideck teams must be comprised of the HLO, two firefighters, and a nozzleman/baggage handler. 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 and familiarization with refueling procedures and equipment.

### **3.1.6 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 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

### **3.1.7 Rescue Boat Teams**

#### **Role**

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

#### **Composition**

Offshore installations equipped with 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.

### **3.1.8 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.

### **3.1.9 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.

## **3.2 Emergency Response Team Training**

### **3.2.1 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. 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*”.

### **3.2.2 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 (Deputy Person-In-Charge) 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**

None

#### **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;
- Crisis Management and Crowd Control Management of individuals and teams in emergencies; and
- Dealing with stress in oneself and in others.

### **3.2.3 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 as a helideck team member 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

### **3.2.4 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**

See section 3.2.5 for renewal requirements.

#### **Prerequisites**

- A Current Medical Certificate as per CAPP's Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide.
- 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  
Firefighting techniques  
Fire scene search and rescue operations  
Gas impinging fires  
Machinery space fires  
Helicopter firefighting and rescue

### **3.2.5 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 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 the 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 Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide.
- 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 firefighting agents  
Fire assessment  
Firefighting techniques

Automatic fire detection and protection systems  
Fire scene search and rescue  
Helideck firefighting techniques

### **3.2.6 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 offshore installation to which they have been assigned.

#### **Applies To**

Offshore Installation Managers and those designated to succeed Offshore Installation Manager (Deputy Person-In-Charge) 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 3.2.2 (Command & Control and Management of Major Emergencies) of this document.*

#### **Renewal**

Every five (5) years.

Or every 2 years for those who cannot demonstrate having participated in emergency drills and exercises, in a command role, on an offshore installation in the past two years.

#### **Assessment Content**

Assessments must be carried out by an assessment team. One member of the team must have extensive relevant experience in offshore emergency management and formal training in conducting assessments. At least one member of the team must have experience in a command position. 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 their 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 effectively undertake crisis management and crowd control
- Ability to manage individuals and teams in emergencies
- Ability to deal with stress in oneself and in others

### **3.2.7 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 Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide.

#### **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 requirements are detailed under section 7.2.1 Fast Rescue Craft/Boats.*

### **3.2.8 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 Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide.

#### **Renewal**

Three (3) years

#### **Course Content**

Refer to Section 12

*Note: An STCW Certificate of Proficiency in Survival Craft and Rescue Boat training is an equivalent level of training and considered valid for a period of 3 years.*

### **3.2.9 Survival Craft Coxswain - Recurrent**

#### **Course Objectives**

To provide recurrent practical training that will enable trainees to take command of rigid and inflatable survival craft during abandonment.

#### **Applies To**

All designated survival craft coxswains on an offshore installation.

*Note: Individuals who do not complete Survival Craft Coxswain-Recurrent training prior to the expiration of their Survival Craft Coxswain Certificate are required to repeat the Survival Craft Coxswain 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 the 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**

Minimum of 2 days

#### **Prerequisites**

- A Current Medical Certificate as per CAPP's Atlantic Canada Medical Assessment for Fitness to Work Offshore Guide.
- A valid Survival Craft Coxswain certificate, or equivalent.

*Note: The STCW Certificate of Proficiency in Survival Craft and Rescue Boats Excluding Fast Rescue Boats is only considered valid for three years.*

#### **Renewal**

Three (3) years

#### **Course Content**

Refer to Section 12



### 3.3 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, source capping and containment;
- 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.

### **3.4 Emergency Drills and Exercises**

It is important that the offshore work force, as well as onshore support personnel and agencies, be well-practiced in reacting to possible emergency events for an offshore installation. These potential events must form the basis of developing 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. Additionally, they can provide ongoing safety and emergency action training and be used to assess the capability and readiness of personnel, in particular those with a role on an emergency response team.

#### **3.4.1 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 to ensure that 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.

##### **a. Evacuation/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 evacuation procedures.

###### **Frequency**

Evacuation – weekly

Abandonment – quarterly (evacuation drill inclusive of demonstration and/or donning of survival equipment and orientation to the evacuation stations).

## **Participation**

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

### **b. 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 firefighting equipment, including protective clothing, is stored;
- aware of the areas covered by fixed firefighting 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 firefighting as part of their emergency duties assignment.

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

### **c. 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;
- This may include, but is not limited to drilling, tripping, completion, intervention, logging, testing, and stimulation activities, giving due consideration to specific operational aspects such as no pipe in hole, unshearables across the BOP, etc.
- where applicable, familiar with the special problems and inherent hazards associated with HP/HT wells and/or deepwater wells;

- able to correctly don and use a self-contained breathing apparatus (SCBA) or breathing air system ;
- able to correctly enter the results of well control drills in the IADC report.
- aware of the barriers to flow and are practiced in both detection and prevention of the loss of a well barrier;
- aware of the pass or fail criteria associated with a drill, and the potential implications of and inadequate response during an actual well control event; and
- assessed for proficiency both collectively and individually in responding to a well control event.

### **Frequency**

Weekly or otherwise at an increased frequency as needed to ensure crews proficiency. Drills should be relevant to on-going or upcoming operations.

### **Participation**

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

## **d. 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.

## **e. 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.

## **f. 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.

## **g. 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.

## **h. Confined Space Drill**

**Purpose**

To ensure personnel with confined space rescue and first aid duties are familiar with:

- hazards likely to be faced during entry into enclosed spaces;
- signs of adverse health effects caused by exposure to hazards during entry; and
- personal protective equipment required for entry.

**Frequency**

At least once every two months

**Participation**

Crew members with enclosed space entry or rescue responsibilities.

Weekly confined space team training will be considered as equivalent to a confined space entry drill.

## **i. Maritime Security Drill**

Security drills should test individual elements of the offshore installation security plan including response to security threats, breaches of security, and security incidents. Drills should take into account, in respect of the offshore installation, the types of operations, personnel changes, types of vessels interfacing with it, and other relevant circumstances.

**Frequency:**

Drills should be conducted:

- (a) at least once every three months; and
- (b) as soon as practicable after operations resume at an offshore installation that has been out of service or inactive for more than three months.

**Participation:**

If, at any given time, more than 25% of the permanent personnel at the offshore installation have not participated in a security drill within the previous three months, a security drill should be conducted within one week.

If an offshore installation is involved in the implementation of MARSEC level 2 or MARSEC level 3 following a security incident, the implementation of the MARSEC level can be considered equivalent to a drill.

**3.4.2 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:  
☐ Evacuation/Abandonment  
☐ Fire  
☐ Man Overboard/FRC  
☐ Anchor Quick Release  
☐ Well Control  
☐ Ballast Control  
☐ First Aid  
☐ Confined Space Entry  
☐ Maritime Security  
☐ Other

Drill Scenario:

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	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:

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Completed by:	Position:	Date:
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### 3.4.3 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 emergency preparedness or readiness, 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.

Refer to the Glossary (Section 10) for the definitions of “Emergency Drill” and “Emergency Exercise”.

#### **Frequency**

Offshore Emergency Exercises to be held a minimum of every 3 months.

Offshore/Onshore Emergency Exercises to be held at a minimum of every 18 months. Participation should include all appropriate offshore personnel and onshore support teams, and any outside agency that may become involved in the response to a major emergency offshore.

#### **3.4.4 Maritime Security Exercises**

Maritime security exercises should fully test:

- (a) The offshore installation security plan, with active participation of personnel who have specified security responsibilities; and
- (b) The communication and notification procedures, elements of coordination, resource availability and response.

Exercises may be:

- (a) Full-scale or live;
- (b) Tabletop simulation or seminar;
- (c) Combined with other appropriate exercises; or
- (d) A combination of the above.

#### **Frequency:**

Should be conducted at least once every calendar year with no more than 18 months between them.

#### **Participation:**

Depending on their scope and nature, security exercises may include security personnel from vessels, marine facilities, other offshore installations, or competent authorities.

## 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**

Refer to the *Canada - Newfoundland and Labrador* and the *Canada – Nova Scotia Offshore Marine Installations and Structures Occupational Health and Safety Transitional Regulations*, current versions, for requirements.

*Note:* Advanced First Aid and the Mariner's (Marine) Advanced First Aid are equivalent to each other. It is not necessary for individuals who hold an Advanced First Aid certificate to obtain a Marine Advanced First Aid certificate, as long as the Advanced First Aid training has been obtained from an accredited training provider (St. John Ambulance or Canadian Red Cross).

### **Course Duration**

Five (5) days

### **Prerequisites**

None

### **Renewal**

CPR-HCP/AED (Health Care Professional), annual renewal.

### **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
- 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 Emergency 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**

Refer to the *Canada - Newfoundland and Labrador* and the *Canada – Nova Scotia Offshore Marine Installations and Structures Occupational Health and Safety Transitional Regulations*, current versions, for requirements.

### **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/AED
- Hypothermia, diagnosis and treatment

## **4.5 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.

## **4.6 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

## **4.7 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 work at heights.

### **Course Duration**

One day specific to the offshore Atlantic Canada oil and gas industry.

### **Prerequisites**

None

### **Renewal**

Every three years

### **Course Content**

- Legislative requirements
- Fall protection theory
- Types of equipment and limitations of each type
- Identification of equipment using samples
- Theoretical 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
- Practical training in the use and application of fall arrest equipment and fall prevention systems

*Note: Should the installation enter provincial jurisdiction offshore then provincial fall protection requirements apply.*

## **4.8 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**

3 years (36 months)

### **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)

## 4.9 Hazardous Area Equipment Training - Recurrent

### Objectives

To ensure that those who are involved in engineering or installations in hazardous areas are conversant with the risk associated with improper maintenance and know how to design and implement an inspection program that meets international standards. The refresher provides an opportunity to review the theory and obtain practice with the tools to develop an EX equipment maintenance strategy that reduces the risk of fire or explosion due to failed equipment to a level that is “as low as reasonably practicable”.

### Applies To

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

*Note: Individuals who do not complete the Hazardous Area Equipment Training-Recurrent prior to the expiration of their Hazardous Area 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 the 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.*

### Prerequisites

A valid certificate in Hazardous Area Equipment Training that meets the course content requirements of Section 4.8 of this Standard Practice.

### Renewal

3 years (36 months)

### Course Content

- Hazardous atmospheres
- Area classification

- Ignition sources
- Methods of explosion protection
- Apparatus standards, certification and marking
- Intrinsic safety
- General Principles of inspection and maintenance



## 4.10 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 Offshore Petroleum Boards is required to have this training.

*Note: 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 casual 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

## **4.11 Marine Advanced First Aid**

### **Course Objectives**

To provide designated personnel with Marine Advanced First Aid Training.

### **Applies To**

Refer to the *Canada - Newfoundland and Labrador* and the *Canada – Nova Scotia Offshore Marine Installations and Structures Occupational Health and Safety Transitional Regulations*, current versions, for requirements.

*Note:* “Mariner’s” First Aid, as referenced in the Regulation is considered equivalent to “Marine” First Aid.

### **Course Duration**

Minimum of 31 hours (4.5 days)

### **Prerequisites**

Canadian Document Number (CDN) from Transport Canada

### **Renewal**

Three (3) years

Annual recertification of CPR-HCP/AED required.

### **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
- CPR-HCP/AED (Health Care Professional), annual renewal.

*Note:* Marine Advanced First Aid meets the intent and requirements of the Mariners' First Aid referenced in the *Transitional OHS Regulations*. Marine Advanced First Aid is considered by the Offshore Petroleum Boards to be equivalent to Mariners' First Aid.

*Note 2: Certificates are only valid for the first 3 years of the validity period from the date of issue.*

## **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

In August 2016 the *International Association of Oil and Gas Producers (IOGP)* issued *Report 476* titled *Recommendations for enhancement to well control (training, examination and certification)*. This report was reviewed and considered in the development of the structure of well control training described herein.

The structure having various levels of well control training was developed to enable participants to receive *role-specific* training to develop the precise skills and competency needed, and knowledge of equipment and techniques necessary for improved well control preparedness and performance in their particular role. Well control training covers all phases of well operations including (drilling, completion, intervention and workover). For the purposes of this document, intervention also refers to completion and workover activities.

Well control assurance requires that primary well control is maintained and, when this is not the case, the situation is properly addressed and the status of the well is safely returned to normal. The establishment of the following five levels of training will improve well control assurance through the full life cycle of the well.

**Level 1 - Awareness:** This level of training is intended to provide general awareness of well control equipment and activities throughout the life cycle of a well for any personnel that contribute to a well project.

**Level 2 - Introductory:** This level of training is intended to provide a foundation level of well control knowledge of for any personnel that could influence well control operations from a monitoring, observing, reporting perspective.

**Level 3 - Fundamental:** This level of training is intended to provide a fundamental level of well control knowledge and skills for any personnel that operate well control equipment and take direct corrective first action in responding to a well control event.

**Level 4 - Supervisory:** This level of training is intended to provide a supervisory level awareness of well control knowledge and skills for any personnel that conduct oversight, of well activities and who analyze, anticipate, plan and verify next steps to be taken in a well control event.

**Level 5 - Enhanced Supervisory and Engineering:** This level of training is intended to provide an advanced level of well control knowledge for any personnel that engage in well design, approval, or are in a senior decision making capacity (either onshore or offshore) in well execution programs. It is considered to be above and beyond the standard level of well control training focusing primarily on complex well kill scenarios.

**Note:** Refer to Appendix E for the Well Control Training Matrix and requirements for positions currently not listed in the Standard Practice.

The Level 1 - Awareness should include high level discussion on the following key topics:

- The life cycle of a well
- Overview of the fluids circulation systems on a drilling rig
- Pressure management and well barrier concepts
- Well control during drilling operations
- Introduction to well intervention operations
- Pressure control during well intervention

Key learning topics for levels 2- 4 well control courses for drilling operations will include (at various depths of investigation per level as defined by IADC and IWCF course curriculum):

- Well control concepts, (pressures, U-tubing, balanced/unbalanced, primary and secondary well control, etc.)
- Well barriers
- Kicks (causes of kicks, types of influx, abnormal pressure warning signs, and kick detection)
- Gas characteristics and behavior, including fluid migration
- Well control methodologies (constant bottom-hole pressure well control methods, volumetric, lubricate and bleed.)
- Well control during casing and cementing operations
- Well control drills and risk management
- Fluid management and circulation system
- Shut in procedures and post shut in monitoring
- Well control equipment
- Subsea well control (required for Subsea Endorsement)
- Government, industry and company rules, orders and policies
- Simulator exercises for levels 3 and 4

Key learning topics for levels 2- 4 well control courses for intervention operations will include (at various depths of investigation per level as defined by IADC and IWCF course curriculum):

- Well control concepts. (Pressures, U-tubing, balanced/unbalanced, primary and secondary well control.)
- Well barriers
- Kick discussion including causes of kicks, types of influx, abnormal pressure warning signs, and kick detection,
- Gas characteristics and behavior, including fluid migration
- Well control drills and risk management

- Well control methodologies (constant bottom-hole pressure methods, circulatory well control pressure methods, stripping and snubbing, and bullheading.)
- Well control during coil tubing and wireline operations
- Lubricating operations
- Grease injection systems
- Live well intervention well control
- Killing a producing well
- Completion, workover & packer fluids
- Well control equipment - surface and subsurface
- Fishing operations
- Hydrates
- Cold temperature considerations
- Equalizing pressure safely
- Pressure/temperature/compressibility effects on liquids/gases
- Explosive decompression and stored energy hazards
- Light pipe/wire versus heavy
- Government, industry and company rules, orders and policies

The Level 5 Enhanced Supervisory and Engineering well control course content is goal-oriented in nature, to permit Operators the flexibility to tailor this course to best suit their needs for enhanced well control competency. The aim of this course is to improve competency for participants in responding to various well control scenarios that are not commonly covered in the levels 2-4 training programs.

Sections 4.14.1 through 4.14.5 provide further details on Levels 1 through 5 well control training. The table in Appendix E provides a list of training requirements by position for drilling and/or intervention, as applicable.

*Note: Levels may need to be adjusted depending on responsibilities. The list provided in the table is a guide and not exhaustive.*

*Note: For well intervention well control training, discipline specific certificates are acceptable (e.g. wireline well control certificate for wireline personnel).*

*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 Offshore Petroleum Board. 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 8, with specific reference to Section 3.2 of the Standard Practice.*

#### **4.13.1 Level 1: Well Control Awareness Training**

##### **Course Objectives**

To provide personnel with a general awareness of offshore well control and the importance of maintaining well control assurance throughout all phases of the well life cycle.

##### **Applies To**

All personnel contributing to a well project who do not directly influence or who are not directly involved well control planning, maintenance, monitoring, supervising or response activities. Refer to the table in Appendix E for a more complete list of positions.

All personnel contributing to a well project must possess a valid Well Control Level 1 Certificate or equivalent.

##### **Course Duration**

Two (2) to four (4) hours

##### **Prerequisites**

None

##### **Renewal**

None

##### **Course Content**

This course introduces common well control concepts and terminology and provides awareness of the two well barrier design philosophy discussing the potential consequences for loss of well control on an offshore installation.



## 4.13.2 Level 2: Introductory Offshore Well Control

### Course Objectives

To provide appropriate personnel with a foundation level knowledge of offshore well control equipment and techniques to enable them to effectively act under directed guidance in support of well control assurance.

### Applies To

All well-site operations team personnel inclusive of support services that are not directly operating the well control equipment, but have the potential to influence well control assurance via monitoring, observing, reporting or detection activities. For example: well-site operations engineer; well-site operations geologist; subsea BOP engineer; intervention services crew members; mud logger. Refer to the table in Appendix E for a more complete list of positions.

Attendees should be the members of the well-site operations team working in roles which could directly contribute to the creation, detection or control of a well influx or lack of well integrity. Support services should have Level 2 training relevant to their function and its impact on well control assurance. These personnel must possess a valid IADC or IWCF Well Control Certificate to at least Level 2, from an IADC or IWCF accredited training provider.

**Course Duration:** Two (2) days or online equivalent by an IADC or IWCF accredited training center.

### Prerequisites

Level 1 Awareness of Offshore Well Control Training

### Renewal

Every 5 years

Note the Renewal frequency for OIM on a drilling installation only is every 2 years.

### Course Content

Training at Level 2 should be tailored to address the specific environment and type of well control equipment (surface well control equipment or subsea well control equipment). The training should be specific to the activity that the individual will be involved in (drilling and/or intervention).

### **4.13.3 Level 3: Fundamental Offshore Well Control**

#### **Course Objectives**

To provide appropriate personnel with a fundamental working level knowledge of offshore well control equipment and techniques to maintain well control and to take the correct first actions in response to a well control event.

#### **Applies To**

All well-site operations team personnel inclusive of support services that are required to perform actions to ensure well control assurance, or respond to a well control event. For example: driller; assistant driller; wireline, slickline or coiled tubing operator. Refer to the table in Appendix E for a more complete list of positions.

All well control equipment operators must possess a valid IADC or IWCF Well Control Certificate to at least the Fundamental Level, from an IADC or IWCF accredited training provider.

Course Duration Five (5) days

#### **Prerequisites**

Level 2 Introductory Offshore Well Control

#### **Renewal**

Every 2 years

#### **Course Content**

Training at level 3 should be tailored to address the specific environment and type of well control equipment (surface well control equipment or subsea well control equipment). The training should be specific to the activity that the individual will be involved in (drilling and/or intervention). The training should teach methods of influx prevention, detection, control and removal.

Upon completion of the training, certificate holders should be able to perform their role effectively, in particular by identifying anomalies and performing the first actions independently, and recognize that they are empowered to do so. They should be able to proactively communicate with all personnel who provide support to maintaining well control (e.g. Level 2 trained personnel). The training for drilling activity will also provide practical hands-on training in proper well control procedures during a simulated kick situation using a certified rig floor simulator.

#### **4.13.4 Level 4: Supervisory Offshore Well Control**

##### **Course Objectives**

To provide appropriate personnel with a supervisory level of knowledge of offshore well control equipment and techniques to provide oversight and ascertain that primary well control is being appropriately managed. Additionally it will enable supervisors to analyze anomalous events and plan the appropriate sequence of steps to take following shut in of a well, to minimize impact and return the well to a safe and normal operating well condition.

##### **Applies To**

All well-site operations team supervisory personnel inclusive of support services that are responsible to oversee equipment operators, and to verify well control assurance in maintaining primary well control and also in responding to a well control event. For example: Drilling and/or Intervention supervisor, Toolpusher, Rig Manager, Wireline, Slickline or Coiled Tubing Supervisor. Refer to the table in Appendix E for a more complete list of positions.

Refer to the table in Appendix E for a more complete list of positions.

All supervisors of offshore well control equipment operators must possess a valid IADC or IWCF Well Control Certificate to the Supervisory Level from an IADC or IWCF accredited training provider.

##### **Course Duration**

Minimum Four (4) days

##### **Prerequisites**

Minimum Level 2 Introductory Offshore Well Control

##### **Renewal**

Every two (2) years

##### **Course Content**

Training at level 4 should be tailored to address the specific environment and type of well control equipment (surface well control equipment or subsea well control equipment). The training should be specific to the activity that the individual will be involved in (drilling and/or intervention). The training should teach methods of influx prevention, detection, control and removal.

Upon completion of the training, certificate holder should be able to establish consistent practices to assure continued primary well control and well integrity. When anomalous situations occur, or conditions escalate, they will be able to analyze the situation, develop plans to minimize the impact and recover the situation to the norm. The training for drilling activity will also provide practical hands-on training in proper well control procedures during a simulated kick situation using a certified rig floor simulator.

#### **4.13.5 Level 5: Enhanced Supervisory and Engineering Offshore Well Control**

##### **Course Objectives**

To provide appropriate personnel with advanced knowledge in the application of well integrity and well control principles. This training should expand the knowledge of the participant beyond kicks during drilling operations. It should provide an opportunity to build competency in well control assurance and in elements of well control that need to be embedded into well design, well control equipment selection and rig selection process.

This training is not intended to teach theory or replace certificates held by those required to complete Level 3 and Level 4 courses. For clarity, Levels 1 through 4 courses constitute the minimum requirements to support offshore operations.

##### **Applies To**

All personnel with a key role in well design and in situational analysis and decision making during execution.

##### **Course Duration**

Two (2) days minimum

##### **Prerequisites**

None

##### **Renewal**

Every 4 years; more frequent learning refreshers recommended

##### **Course Content**

This course may be delivered through a variety of means, including classroom lecture, case studies, and team based scenarios. This course should focus on identification and response to anomalous situations, including consideration for human factors, and follow through escalation of well control incidents and appropriate responses. Upon completion of the training, participants should be able to analyze the situation and develop plans to minimize the impact and return the situation to normal operations.

Some training providers may offer an advanced well control training course which meets the intent of Level 5 requirements, for example, the “IWCF Enhanced” or the “IADC Wellcap Plus” certificates. As well, Operators may provide an in-house competency-based session reviewing case studies and scenarios.

*Note:* Level 5 is not the minimum accredited training to be completed to work in the field. It is not intended to teach theory or replace certificates held by those required to complete Level 3 and Level 4 courses.

## **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 Recognized Auditor Training**

### **Objectives**

To ensure that designated individuals can carry out effective and objective audit activities in accordance with recognized methodologies and protocols.

### **Applies To**

HSE Advisor

### **Course Duration**

Minimum of sixteen (16) hours

### **Prerequisites**

None

### **Renewal**

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

### **Course Content**

Minimum requirement is a 2-day internal auditor course that would be eligible for Continuing Education Credits (CEUs) for maintaining a professional designation by a certification body (for example: Board of Canadian Registered Safety Professionals. (BCRSP), Canadian Environmental Certification Approvals Board (CECAB), ECO, International Register of Certificated Auditors (IRCA).



## **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 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 as outlined in section 4.21 Stability and Ballast Control – Recurrent.

### **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*.

*Note: Individuals who do not complete Stability and Ballast Control - Recurrent prior to the expiration of their Stability and Ballast Control Certificate are required to repeat the minimum (9) 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 the 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

Minimum of two (2) 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

To meet requirements under IMO A1079(28) for the Recommendations for the Training and Certification of Personnel on Mobile Offshore Units (MOU's). 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 Supervisor  
WEs assigned to a self-elevating installation.

### Course Duration

Minimum of four (4) days

### Prerequisites

None

### Renewal

Three (3) years as outlined in section 4.23 Stability and Stability of Self-Elevating Units – Recurrent.

### 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, Two (2) day course

IMDG TDG – Marine: Three (3) years, One (1) day course

### **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 Atlantic Canada's offshore areas.

It is required that, for each installation, the installation's Flag State minimum manning requirements will be met at all times and documentation available to confirm this. It is further expected that the International Maritime Organization (IMO) Resolution entitled *Recommendation for the Training and Certification of Personnel on Mobile Offshore Units (MOUs)* as adopted in December 2013 (IMO 1079(28)) will be observed by each installation operating in the Atlantic Canada offshore region. Documentation, including certificates of proficiency and certificates of competency as per IMO 1079(28), will be readily available to confirm how IMO 1079(28) is met.

It is recognized that, due to organizational structure and variations in installation design and complexity, crew position titles and designations may differ from one installation to another.

Additionally, there are various types of MOUs and it is expected that the certificates, training and experience held by the crew of each installation is specific to the type of MOU on which they are operating (e.g. surface, self-elevating, column-stabilized, etc.).

*Note: This Standard Practice specifies training, recurrent training and specific position qualifications that may differ or be over and above those described within IMO 1079(28).*

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## **5.1 Offshore 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 in accordance with the *Accord Acts*.

### **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 Offshore Petroleum Boards 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 MOU Surface / Stability and Ballast Control MOU Self-Elevating Units
- Offshore Well Control Level 2 with the recertification every 2 years.

## **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 Level 4 and Level 5

### **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
- Onshore Senior Drilling Engineer - Offshore Well Control Level 4-and Level 5-
- Offshore Drilling Engineer - Offshore Well Control Level 2

## **5.4 Dynamic Positioning Operator (DPO)**

The Dynamic Positioning Operator is responsible for the operation of the Dynamic Positioning control system and the routine maintenance of the draught, trim and stability of the installation during dynamic positioning operations.

*Note 1:* Operators must ensure that training, experience, and familiarization practices for DPOs align with the Code on the Standards of Training, Certification and Watchkeeping for Seafarers (STCW Code) and the International Marine Contractors' Association (IMCA) publication M 117 "The Training and Experience of Key DP personnel", and follow a recognized certification scheme such as that administered by the Nautical Institute.

### **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 Dynamic Positioning Operator. This would normally take 12 weeks as a DPO trainee under the direction and supervision of an experienced DPO.

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 dynamic positioning system specific to the type of installation to which he/she 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 DPO in the operation of the installation's dynamic positioning 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 Dynamic Positioning Operator shall hold:

- In the case of a semi-submersible MOU, 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 Offshore Petroleum Boards in accordance with the procedure outlined in this document.*

**Mandatory Training**

- Refer to Section 2 for all required safety training
- Dynamic Positioning Induction/Simulation (Full DPO Certification)
- Stability and Ballast Control (for semi-submersible MOU's)
- Offshore Well Control Level 2

## **5.5 Rig Superintendent**

Alternate Titles: Senior Toolpusher, Rig Manager, Drilling Section Leader

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.

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 firefighting 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 Level 4 and Level 5

## **5.6 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 firefighting, 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
- Toolpusher: Offshore Well Control Level 4
- Senior Toolpusher Well Control Level 4 and Level 5

## **5.7 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 Level 3



## **5.8 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 Level 3

## **5.9 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, or in a supervisory position, the candidate must have demonstrated ability to work independently under general supervision.

The candidate must have a 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 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
- Fall Protection Training
- Offshore Well Control Level 2

## **5.10 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 26 weeks as a Floorhand/Derrickhand on a land-based rig (coupled with appropriate orientation and competency assessment on the installation's equipment; or completion of a formal Petroleum Engineering program (coupled with appropriate orientation and competency assessment on the institutions equipment).

Based upon formal education, on-the-job experience, or previous work experience, the candidate must be able to demonstrate the following competencies:

- demonstrate a clear understanding of the role and responsibilities of a floorhand and
- perform basic floorhand tasks safely and competently to the satisfaction of the employer.

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 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
- Offshore Well Control Level 2

## **5.11 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 Level 2 or above

## 5.12 Barge Supervisor

Alternate Titles: Rig Captain, Barge Master, Marine Section Leader 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

### 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 installation 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 Offshore Petroleum Boards in accordance with the procedure outlined in this document.*

## **Mandatory Training**

- Refer to Section 2 for all required safety training
- Stability and Ballast Control MOU Surface / Stability and Ballast Control MOU Self-Elevating Units
- Offshore Well Control Level 2

### **5.13 Assistant Barge Supervisor**

Alternate Titles: 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 MOU Surface / Stability and Ballast Control MOU Self-Elevating Units
- Offshore Well Control Level 2

## **5.14 Ballast Control Operator**

Alternate Titles: Control Room Operator,

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 Offshore Petroleum Boards in accordance with the procedure outlined in this document.*

### **Mandatory Training**

- Refer to Section 2 for all required safety training
- Stability and Ballast Control MOU Surface / Stability and Ballast Control MOU Self-Elevating Units
- Offshore Well Control Level 2



### **5.15 Mud Logging Supervisor (Operator)**

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
- Mud Logging Crew: Offshore Well Control Level 2
- Mud Logging Supervisor: Offshore Well Control Level 3

## **5.16 Maintenance Supervisor**

Alternate Titles: Chief Engineer, First Engineer, Technical Section Leader

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 Offshore Petroleum Boards in accordance with the procedure outlined in this document.*

### **Mandatory Training**

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

### **5.17 Assistant Maintenance Supervisor**

Alternate Titles: Second Engineer, Assistant Engineer, Senior Mechanic, Chief Mechanic, Watchkeeping Engineer, Assistant Technical Section Leader

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
- Offshore Well Control equivalent to Level 1 within the first six months of assuming the role.

## **5.18 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
- Offshore Well Control Level 1 within the first six months of assuming the role.

## **5.19 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 Area Equipment Training
- Offshore Well Control Level 1 within the first six months of assuming the role

## **5.20 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 electronics 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 Area Equipment Training
- Offshore Well Control Level 1 within the first six months of assuming the role

## **5.21 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
- Offshore Well Control Level 1 within the first six months of assuming the role

## 5.22 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](http://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
- Offshore Well Control Level 1 within the first six months of assuming the role



### **5.23 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
- Offshore Well Control Level 1

## **5.24 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 are 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 (Marine (IMDG))
- Transportation of Dangerous Goods (Air) IATA

## **5.25 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.

### **Mandatory Training**

- Refer to Section 2 for all required safety training.

## **5.26 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
- Offshore Well Control Level 1

## 5.27 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.

### Mandatory Training

The *Offshore Physical Environmental Guidelines* identify the appropriate codes and procedures to be used for taking meteorological observations on offshore drilling and production installations. Environmental Observers are required to be trained and/or certified in accordance with the *Offshore Physical Environmental Guidelines* and the Offshore Petroleum Boards will accept delivery of this training by any recognized training institution or qualified instructor.

- 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.*

## **5.28 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

## **5.29 Intervention Supervisor (Operator)**

Alternate Titles: Well Supervisor; Well Services Supervisor; Completion Supervisor

The 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. For the purpose of this document intervention also includes completion and workover activities.

### **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 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 – Level 4 and Level 5

## 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 contractor personnel assigned to production installations operating in Atlantic Canada's offshore areas.

“It is required that, for each floating production installation, the installation's Flag State minimum manning requirements will be met at all times and documentation available to confirm this. It is further expected that the International Maritime Organization (IMO) Resolution entitled *Recommendation for the Training and Certification of Personnel on Mobile Offshore Units (MOUs)* as adopted in December 2013 (IMO 1079(28)) will be observed by each floating production installation operating in the Atlantic Canada offshore region. Documentation, including certificates of proficiency and certificates of competency as per IMO 1079(28), will be readily available to confirm how IMO 1079(28) is met.”

For each position, the role description is provided along with details regarding service requirements. It is recognized that, due to organizational structure and variations in production installation design and complexity, crew position titles and designations may differ from one installation to another.

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## 6.1 Offshore 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 in accordance with the *Accord Acts*.

### 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 appropriate level of knowledge of drilling and well operations to be able to coordinate production operations with ongoing drilling, completion and work-over activity. On production installations it is expected that an appropriately trained and qualified drilling management team, as specified in Chapter 5 of this document, will report to the Offshore Installation Manager (production) on matters that affect the production installation.

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
  - Offshore Well Control Level 2 with recertification every 2 years
  - Offshore Well Control for production facilities with no drilling equipment such as an FPSO Level 2 with recertification every 5 years
- Ballast Control/Stability (for semi-submersible Production Installations)

## **6.2 Barge Supervisor**

Alternate Titles: Master, Captain; Vessel Lead, Marine Supervisor

The Barge Supervisor 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 Barge Supervisor 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 Barge Supervisor.

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 Barge Supervisor shall hold:

- Master Near Coastal adherence to flag state minimum manning requirements
- 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
- Offshore Well Control to Level 2 with recertification every 5 years

### **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 Level 2 with recertification every 2 years

## **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
- Offshore Well Control Level 2 with recertification every 2 years.

## **6.5 Marine Coordinator**

Alternate Titles: First Officer; Vessel Coordinator; Chief Mate

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

### **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 Marine 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 Marine Coordinator shall hold:

- Master Near Coastal adherence to flag state minimum manning requirements
- 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

## **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
- Offshore Well Control- Level 1 – no expiry

*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 completed a 4<sup>th</sup> class power engineering, process operations engineering technology diploma or equivalent work in an operator role on a production facility and 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**

A 4<sup>th</sup> class power engineering, process operations engineering technology diploma or equivalent work in an operator role on a production facility.

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
- Offshore Well Control- Level 1 – no expiry

## **6.10 Process Operator**

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

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

### **Qualifications**

A 4<sup>th</sup> class power engineering, process operations engineering technology diploma or equivalent work in an operator role on a production facility.

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 Marine Technician**

Alternate Titles: Second Mate, Vessel Control Systems Operator

The Marine Technician 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 Marine Technician 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 Marine Technician.

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 Marine Technician shall hold:

- Watchkeeping Mate (STCW II/1 OOW) Certificate
- Oil Tanker Endorsement Level 1 (Oil and Chemical Tanker Familiarization)
- 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

## **6.12 Mechanical Technician**

Alternate Titles: Mechanical Coordinator, 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: Electrical Coordinator, 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 Area Equipment Training

## **6.14 Instrument Technician**

Alternate Titles: Instrumentation Coordinator, 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 Area 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 Area 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](http://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: 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 (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 Medic**

Alternate Titles: Offshore Health Advisor, Platform Nurse

The Medic 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 Medic.

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 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.

### **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.

### Mandatory Training

The *Offshore Physical Environmental Guidelines* identify the appropriate codes and procedures to be used for taking meteorological observations on offshore drilling and production installations. Environmental Observers are required to be trained and/or certified in accordance with the *Offshore Physical Environmental Guidelines* and the Boards will accept delivery of this training by any recognized training institution or qualified instructor.

- 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 Intervention Supervisor**

**Alternate Titles: Well Supervisor; Well Services Supervisor; Completions 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. For the purpose of this document intervention also includes completion and work over activities.

### **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 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 Intervention Level 4 and Level 5

## **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.

Foreign flagged vessels are regulated by their flag state's maritime administration with oversight from Transport Canada pursuant to the Coastal Trading Act (CTA). Training relevant to mass rescue operations is described in the Atlantic Canada Standby Vessel (AC-SBV) Guidelines issued jointly between the CNSOPB and C-NLOPB.

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 Document stating the minimum manning and certification required for the safe operation of the vessel, and an AC-SBV Document of Compliance (DOC) 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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7.2	Fast Rescue Craft/Boat (FRC/B) .....	158
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## **7.1 Deck Rating**

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 (FRB), crewman/spotter of FRB, Operate FRB Davit for launch/recovery, prepare FRB for launch/recovery, operate crane if necessary for deployment of lifesaving equipment, deployment and recovery of scramble nets, operate crane for deployment of Dacon Scoop (if fitted) and First Aid attendant.

During mass rescue operations, duties, may include retrieval, carriage, decontamination and processing of casualties, including any non-survivors.

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 Deck Rating.

### **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 Document identifies the number of Bridge Watch Certificates required. There will be a minimum number of deckhand positions requiring Bridge Watchman Certification; however, this may not apply to all deckhand positions.

## **7.2 Fast Rescue Craft/Boat (FRC/B)**

### **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**

Any crewmember designated as a member of the FRC/B crew for standby operations.

*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 shall be obtained as per STCW requirements.*

### **Course Content**

- STCW Code, Chapter VI.
- 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

### **7.3 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

CPR-HCP/AED (Health Care Professional), annual renewal.

#### **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

*Note 2: Certificates are only valid for the first 3 years of the validity period from the date of issue.*



## **7.4 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 AC-SBV *Document of Compliance*.

### **Course Duration**

Two days

### **Prerequisites**

None

### **Renewal**

Three (3) years

Note: CPR-HCP/AED (Health Care Professional), annual renewal.

### **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

## **7.5 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

## **7.6 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

Health Canada: <http://www.hc-sc.gc.ca/ewh-semt/occup-travail/whmis-simudut/ghs-sgh/index-eng.php>

Canadian Centre for Occupational Health and Safety:  
[http://www.ccohs.ca/oshanswers/chemicals/whmis\\_ghs/general.html#\\_1\\_6](http://www.ccohs.ca/oshanswers/chemicals/whmis_ghs/general.html#_1_6)

## **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 Offshore Petroleum Boards will monitor all exemptions and will notify the operator in question regarding any specific or general problem or concern. The Offshore Petroleum Boards 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" 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 Offshore Petroleum Boards. 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 Offshore Petroleum Boards 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 Offshore Petroleum Boards and documentation supporting the determination must be available upon request. The Offshore Petroleum Boards 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 Offshore Petroleum Boards 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

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### C. PLAN TO ACHIEVE COMPLIANCE

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### D. INTERIM MITIGATION MEASURES

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### 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 Charter

### 1. Mandate & Objectives

The Atlantic Canada Offshore Petroleum Training and Qualifications Committee (TQC) was formed as a joint effort among the offshore petroleum industry operators, drilling contractors and regulatory authorities to produce a single document containing a concise description of the minimum qualifications and training required of individuals working in Atlantic Canada's offshore petroleum industry.

The respective Regulatory Authorities referred to below and established by the *Accord Acts* are – the Canada Nova Scotia Offshore Petroleum Board (CNSOPB) and the Canada Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB), also known as, the Boards.

The objectives of the TQC are to:

Support the development of a sustainable competent offshore workforce capable of working in a safe and efficient manner.

Clearly define and publish the Standard Practice for the *Atlantic Canada Offshore Petroleum Industry Standard Practice for the Training and Qualifications of Personnel* (Standard Practice)

Maintain a global network and outlook to ensure that industry knowledge and best practices are identified and applied.

Incorporate where practicable, best industry practice in the development and maintenance of the Standard Practice.

Identify and verify where practicable and consistent with Canadian Regulation, international offshore training that is acceptable in Atlantic Canada.

The Standard Practice must be ratified by the Boards and CAPP Executive Policy Group (EPG) and will apply to all offshore petroleum operations within their jurisdiction to the extent that it is consistent with the requirements laid down in applicable legislation.

The Boards and the petroleum industry will use the Standard Practice, 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 adherence solely to the Standard Practice may not be sufficient to ensure compliance with all applicable legislation.

CAPP is the custodian of the Standard Practice, which the Boards administer. It is recognized that prevailing Regulations and orders by Board Safety Officers made pursuant to the legislation take precedence over the Standard Practice.

For any specific requirement laid out 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 alternative provides for an equivalent or satisfactory level of competence and safety.

The *Standard Practice* will be reviewed on an on-going basis by the Committee and will be revised and re-issued every two years until such time as the Committee deems there are no more updates or changes necessary. 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.

## **Membership**

The Membership of the TQC is voluntary and made up of suitably qualified persons provided as follows – one member each from the Newfoundland and Labrador Offshore Petroleum Board and the Nova Scotia Offshore Petroleum Board, two from the Canadian Association of Oilwell Drilling Contractors (CAODC), and up to five Operator representatives from the Canadian Association of Petroleum Producers (CAPP). In addition, two voting members of the offshore workforce provide offshore worker representation.

The Membership of the TQC signifies the voting members.

The Committee selects a chairperson from the membership for a two-year term.

Accountabilities:

Chair – Chair all Committee meetings, set agenda and ensure that the key processes and governance of the Committee are followed.

Members – suitably qualified members are drawn from the Boards, Operating Companies, the COADC, and offshore workforce to participate in all meetings, provide technical input and advice to the Chair, support the Chair in fulfilling the TQC mandate and work within the key processes and governance of the Committee.

All members have an obligation to bring their experience and knowledge to the

Committee and participate fully. Members should also be aware of their responsibility to communicate widely with their Stakeholders to maximize the knowledge transfer and solicit feedback and input.

Members may nominate suitably qualified alternates to attend meetings, with the prior approval of the Chair. A quorum consists of four members and a representative from at least one of the Boards. All Committee decisions will be made by consensus, but where, consensus cannot be achieved a vote will be held.

## **Organisation**

The TQC reports to the Boards and to the CAPP Executive Policy Group, and all major decisions made, and any public documents produced by the Committee will be referred to these two groups for ratification.

**Primary Stakeholders:** The primary stakeholders for this Committee are the Atlantic Canada offshore workforce, who must undertake the training as required by the Standard Practice, and are generally employees of the offshore Operators and Contractors.

**Additional Stakeholders:** In addition to the offshore workforce, other stakeholders have a vested interest in the provision of offshore training and the competence and safety of the offshore workforce. These may include the following:

- Canadian Association of Oilwell Drilling Contractors
- CAPP Atlantic Canada Safety Committee
- CAPP Executive Policy Group
- Offshore Industry Operators
- Transport Canada – Marine Safety
- Training Providers
- Marine Safety Council
- Energy Safety Canada Well Control Committee
- Major offshore marine and aviation contractors

**Task Groups:** The TQC establishes Task Groups as required to undertake specific technical work on behalf of the Committee. There are regularly two Task Groups, one responsible for Course Quality Reviews and the second for Training and Competency development. Task Groups meet as directed by the Chair, to assist and to provide guidance as requested by the Committee. The Chair nominates a Committee Member to Chair each Task Group. Task Groups are typically staffed by individuals drawn from Stakeholders and have a charter which describes their particular responsibilities.

**Additional Resources:** CAPP provides secretariat services to the TQC, maintains the Standard Practice and provides additional ad hoc support to the Chair as required, including meeting scheduling, the issue of agenda and records of Committee decisions.



When required, the Committee may retain consultancy services to support the work of the TQC.

## **Planning**

The Committee develops plans to address the following areas:

- Annual goals, objectives, resource requirements and budget
- A five-year look ahead - to be reviewed annually
- A two-year project plan to manage the review and updates to the Standard Practice, including a 45-day review period and change communication to all Stakeholders

## **Implementation**

The Committee utilizes an implementation and governance process to address the following areas:

### **Stakeholder Forum**

Offshore and Additional Stakeholder Engagement - The Committee carries out a 45-day external stakeholder consultation process, which includes offshore Workplace Committees (Occupational Health and Safety) and other external stakeholders as deemed appropriate by the Committee. This process includes a mechanism to allow Workplace Committees (Occupational Health and Safety) to be advised on what action was taken regarding any feedback they provided.

Communications – to address requirements for periodic updates, the TQC publishes presentations bulletins and other information, via the Workplace Committees (Occupational Health and Safety) on all installations active in Atlantic Canada. One member of the TQC is assigned responsibility for advising and leading communications to Stakeholders.

Course Recognition – the TQC uses a course quality review process to review courses against defined criteria.

## **Performance Measurement**

The Committee monitors key indicators to measure its performance against its goals and objectives, resource utilization, budget, key processes, governance and project deliverables.

## **Review**

The Committee conducts a formal review annually to assess whether it is meeting its mandate, delivering on its goals and objectives, planning and implementing its work effectively and efficiently, and measuring its performance adequately.

## **Editorial Changes**

Editorial changes to the *Standard Practice*, approved by the TQC; do not require external stakeholder consultation or ratification by the Boards. Editorial changes would include things such as error corrections, updating information or revised wording. As long as the proposed changes do not impact training criteria or do not change the meaning or intent of a training requirement, they can be approved by the TQC. If in doubt, editorial changes will be brought to the TQC Secretariat and Boards for consideration.

## 10 Glossary

**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** - means an individual who, in return for monetary compensation, performs work or services for an employer in respect of a work or activity for which an authorization has been issued.

**employer** - means a person who employs or contracts for the services of any individual in respect of a work or activity for which an authorization has been issued, if that person has the power to exercise direction and control over the individual's work at the workplace.

**Offshore Petroleum Boards** - 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.

**first aid attendant** - means a medic or a qualified person who is a holder of an emergency first aid certificate, a standard first aid certificate, a mariner's first aid certificate or an advanced first aid certificate or of a registered nurse's certificate recognized under the laws of a province.

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

**operator** - means a person who holds an authorization.

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

**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.

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

**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. This Section provides the competence requirements for the following three courses:

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:

#### **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 (refresher) is identical to the BST. The refresher course is used to maintain the BST competences. As such, the refresher course content emphasis lies more on the performance criteria and less on the lecture aspects as the underpinning

knowledge and understanding is considered a pre-requisite of the course. Therefore, the lecture components are typically of shorter duration in the refresher course.

## 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.

During training exercises it is the responsibility of the Training Provider to account for the location and safety of all trainees/students. The instructor must conduct a head count of all registered students prior to commencing training, during and after exercises are completed. This is especially important in scenarios where environmental conditions are being used.

The Training Provider instructor prior to training should demonstrate the importance and method of conducting buddy checks based on the activity being conducted.

The table 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.

#### **11.2.4 Responsibilities of the Trainee**

It is the responsibility of the trainee to medically self-declare any change in his or her mental or physical health prior to commencing training to the training provider including each day of training.

### 11.3 BST, BST-R and OSI Notes

- THE USE OF HUEBA IN THE HUET IS A P2 REQUIREMENT FOUR (4) OUT OF FIVE (5) RUNS IN THE HUET.
- \*One HUET run must consist of deploying and using the HUEBA after inversion.
- SECTIONS 2.4.5 THROUGH 2.4.9 ARE HUET COMPETENCIES NOT RELATED TO THE USE OF THE HUEBA.
- The (SWET) chair training MUST be taken before the HUEBA in HUET training runs as per the Canadian Aviation Regulations (CAR)

*Note: For trainees who are not medically cleared to use the HUEBA in HUET and have a valid medical, the trainee must be “red tagged” by the training provider and permitted to complete the training without use of the HUEBA in the HUET. Upon successful completion of the training, the trainee will be issued the relevant certificate.*



## 11.4 Competence Table - BST, BST-R and OSI

**Table 1**

ID	Competence Statement	Competence Type	OSI	BST	BST-R
<b>1</b>	<b>WORKING OFFSHORE</b>				
<b>1.1</b>	<b><i>The industry</i></b>				
1.1.1	Describe, generally, offshore petroleum exploration and production	L		•	
1.1.2	Identify the most common types of offshore installations	L		•	
<b>1.2</b>	<b><i>Managing risks</i></b>				
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		•	
<b>1.3</b>	<b><i>Personnel transfer</i></b>				
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	Observe the correct positioning and behavior during a personnel transfer referencing various devices in use.	P3	•	•	•
1.3.4	Describe the personal protective equipment required during personnel transfer	L		•	
<b>2</b>	<b>HELICOPTER SAFETY &amp; EMERGENCY PROCEDURES</b>				
<b>2.1</b>	<b><i>Helicopter operations</i></b>				
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	Watch the video and perform the stretching prior to performing the donning of a representative helicopter passenger transportation suit system (i.e. importance of proper fit; storage considerations; burping, etc.).  Note: Training providers are <i>required</i> (P1) to show the stretching video and to ask students to perform the stretches prior to donning the HPTSS. If a student does not complete the stretching exercises the course certificate will not be issued by the training provider.	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	•	•	•
<b>2.2</b>	<b><i>Helicopter emergency procedures</i></b>				
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  Note: Dive masks/goggles must be available to students. Participants should be provided with dive masks/goggles to use in the HUET if they choose to do so. The presentation of the information on the use of goggles should present the pros and cons of using them in a neutral manner so that participants can choose whether or not to use them.	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	BST	BST-R
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 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	•	•	•
<b>2.3</b>	<b>Helicopter emergency equipment</b>				
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		•	•
<b>2.4</b>	<b>Helicopter egress</b>				
2.4.1	Describe the importance of waiting with seat belt buckled for rolling motion to stop (OR SLOW DOWN) and helicopter to fill with water before egressing an inverted helicopter. This includes not breathing on the HUEBA device prior to inversion (breathe hold)	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 AFTER impact.	P2	•	•	•
	<ul style="list-style-type: none"> <li>BREATH-HOLD RUN</li> </ul>				
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	•	•	•
	<ul style="list-style-type: none"> <li>DEPLOY AND USE THE HUEBA IN AN INVERTED, SUBMERGED SITUATION</li> </ul> <p>*Refer to BST, BST, OSI notes to ensure medical certification has been met.</p>				
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	•	•	•
	<ul style="list-style-type: none"> <li>DEPLOY AND USE THE HUEBA PRIOR TO AND/OR AFTER INVERSION</li> </ul> <p>*Refer to BST, BST, OSI notes to ensure medical certification has been met.</p>				
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	•	•	•
	<ul style="list-style-type: none"> <li>DEPLOY AND USE THE HUEBA PRIOR TO AND/OR AFTER INVERSION</li> </ul> <p>*Refer to BST, BST, OSI notes to ensure medical certification has been met.</p>				

ID	Competence Statement	Competence Type	OSI	BST	BST-R
2.4.9	Demonstrate an inverted underwater egress from a seat located immediately next to a representative mechanical emergency exit, requiring the exit to be jettisoned underwater and deploying and using the HUEBA in an inverted, submerged situation  • DEPLOY AND USE THE HUEBA PRIOR TO AND/OR AFTER INVERSION  *Refer to BST, BST, OSI notes to ensure medical certification has been met.	P2	•	•	•
2.4.10	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).  • DEPLOY AND USE THE HUEBA PRIOR TO AND/OR AFTER INVERSION  *Refer to BST, BST, OSI notes to ensure medical certification has been met.	P2	•	•	•
2.4.11	Describe underwater egress considerations with respect to the presence of an auxiliary fuel tank  Note: Helicopter providers must provide information suitable for presentation of the helicopter configurations to the Training Provider in advance of training Trainees must be aware of auxiliary fuel tank configurations and the implications for emergency egress. Training providers will provide information for auxiliary fuel tank configurations.	L	•	•	•
<b>2.5</b>	<b>Helicopter Underwater Emergency Breathing Apparatus (HUEBA)</b>				
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 with respect to Appendix A of the document.	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	P1	•	•	•
2.5.11	Demonstrate the deployment of a HUEBA in water	P1	•	•	•
2.5.12	Demonstrate clearing the second stage using the purge button in water	P1	•	•	•
2.5.13	Demonstrate clearing the second stage using the blast method (through exhaling) in water	P1	•	•	•
2.5.14	Demonstrate breathing HUEBA bottle to empty in water	P1	•	•	•
2.5.15	DEMONSTRATE THE CORRECT USE OF HUEBA WHILE SEATED IN AN INVERTED, SUBMERGED SITUATION (SWET), ACTIVATE HUEBA PRIOR TO THE INVERSION (BST, BST-R, and OSI trainees).	P1	•	•	•
2.5.16	DEMONSTRATE THE CORRECT USE OF HUEBA WHILE SEATED IN AN INVERTED, SUBMERGED SITUATION (SWET), ACTIVATE HUEBA AFTER INVERSION (BST, BST-R, and OSI trainees).	P1	•	•	•
<b>3</b>	<b>FIRE SAFETY</b>				
<b>3.1</b>	<b>Prevention, detection and control of fire</b>				
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		•	
<b>3.2</b>	<b>Fire response</b>				
3.2.1	Identify the appropriate extinguisher based on a fire class	L		•	

ID	Competence Statement	Competence Type	OSI	BST	BST-R
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		•	
<b>3.3</b>	<b>Self-Contained Breathing Apparatus (SCBA)</b>				
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		•	
<b>3.4</b>	<b>Personal escape devices</b>				
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	•	•	
<b>4</b>	<b>ABANDONMENT &amp; SURVIVAL</b>				
<b>4.1</b>	<b>Emergency preparedness &amp; response</b>				
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	•	•	•
<b>4.2</b>	<b>Enemies of survival</b>				
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		•	
<b>4.3</b>	<b>Personal flotation Apparatus</b>				
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	•	•	•

ID	Competence Statement	Competence Type	OSI	BST	BST-R
4.3.8	Demonstrate in-water behavior while wearing a life-jacket including the HELP position	P2		•	
<b>4.4</b>	<b>Abandonment</b>				
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 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 including shortening the chain, eyes of the chain  "Eyes of the chain" - the last person in the chain turns on to their stomach/front so they can see in the direction the group is swimming.  "Shorten the chain" - each person places their feet at the waist of the next person (rather than under their arms) when they join the chain – forms a compact chain.	P2		•	•
4.4.14	Demonstrate the proper step-off technique to be used from height. Trainees must be provided the option to step off at one meter or at the height required by the MED  The intent of competence statement 4.4.14 is to teach students the proper technique for stepping off from a height – arms crossed on the chest and the legs crossed at the ankles. Trainees should be given the option to demonstrate the step off technique from a lower height of 1 meter.  Training providers will ensure the proper technique for step-off from height is taught. Participants should have an opportunity to demonstrate the step-off technique from height or from a lower height of 1 meter. Teaching the step-off technique for low board water entry is not required under the Standard Practice and it should not be taught as it could result in serious injuries if used during a jump from height.	P2	•	•	•
4.4.15	Participate in an evacuation at sea, making use of available lifesaving equipment	P2		•	•
<b>4.5</b>	<b>Distress signals</b>				
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 using an inert flare	P2		•	
4.5.9	Observe demonstration of safe pyrotechnics activation	P3			•
<b>5</b>	<b>SURVIVAL CRAFT</b>				
<b>5.1</b>	<b>Totally Enclosed Motor Propelled Survival Craft (TEMPSC)</b>				
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		•	•

ID	Competence Statement	Competence Type	OSI	BST	BST-R
5.1.10	Participate during an alarm, mustering and boarding a TEMPSC. Where a releasable TEMPSC is used participants/trainees will board the lifeboat, fasten their seatbelt, release their seatbelt, and then exit the lifeboat. After reboarding the lifeboat at water level possible scenarios could include operating sprinkler, air, MOB-assistance, and/or stretcher transfer. The lifeboat will be lowered to the water by the training provider staff with no trainees onboard. Trainees can re-board the TEMPSC at water level. Where a non-releasable TEMPSC is used, participants may remain on board during lowering.	P2		•	•
<b>F5.2</b>	<b>Life rafts - General</b>				
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		•	•
<b>5.3</b>	<b>Life rafts -Throw overboard</b>				
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		•	•
<b>5.4</b>	<b>Life rafts – Davit launched</b>				
5.4.1	Identify davit launched life rafts on deck	L		•	•
5.4.2	Describe the steps of davit crane operation.  Note: Training providers must ensure that the trainees are informed the operations of the davit crane may differ from facility to facility.	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		•	•
<b>6</b>	<b>SEARCH &amp; RESCUE</b>				
<b>6.1</b>	<b>SAR-organization</b>				
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, HELLO)	L		•	•
<b>6.2</b>	<b>The rescue</b>				
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	Observe a demonstration of the correct procedure for rescue by helicopter (i.e., hoist, frame)	P3		•	

ID	Competence Statement	Competence Type	OSI	BST	BST-R
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		•	•

## 11.5 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 (as applicable) 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 lifting 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 with labelling as applicable, sizing and positioning; emergency exit/window release mechanisms; seat spacing; representative auxiliary fuel tank, 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 a representative mechanical exit;

- 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)
- Transport Canada recognized marine abandonment suit which is fit for purpose
- 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.
- Totally enclosed motor propelled survival craft (TEMPSC) & Launching Systems representative of those found offshore.
- 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 on lifeboat and FRC
  - Appropriate training flares
  - Fit for purpose inflatable, throw over life raft representative of accepted Transport Canada approved life raft (s).



- Appropriate lighting for use in the approved life raft for use during training
  - 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 – e.g. DONUT System
  - scramble net
  - escape chute
  - rope ladder
  - helicopter rescue equipment - rescue basket
- First Aid equipment in accordance with Provincial Occupational Health and Safety Regulations and in addition includes an oxygen kit and automated external defibrillator (AED)

**NOTE: Sanitation of HPTSS**

Training Providers are required to adopt a standard procedure for cleaning the suits based on suit manufacturer recommendations.

**Note: Air Quality Checks in Lifeboats**

As part of the maintenance of lifeboats training providers are required to conduct periodic checks for exhaust leaks. At a minimum, an annual inspection must be conducted. The training provider must be able to demonstrate that an air quality hazard does not exist. Checking the maintenance records for evidence of exhaust checks as part of the maintenance of lifeboats will be added to the course quality review process.

## 11.6 Competence Table – Aircrew Survival Training (AST)

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. This Section provides the competence requirements for the following course:

### Aircrew Survival Training (AST)

The intention of this provide clarity as to what *Line and SAR pilots; Rescue Specialists, and Aircraft Maintenance Engineers* 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.

### 11.6.1 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 course mentioned above is a specialist course. The learning objectives mainly address things on an advanced level.

The focus of the AST is to provide 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.

## 11.7 Defining Competence

### 11.7.1 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. The columns on the right in the competence tables

include indication of the applicability of the competence statement to the respective course.

### 11.7.2 Competence Type

Activities and lessons that comprise the Air Crew Survival Course is 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

### 11.7.3 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.

## 11.8 Competence Table – Air Crew Survival Training (AST)

Table 1– Competence Table AST

ID	Competence Statement	Competence Type	AST
<b>1</b>	<b>WORKING OFFSHORE</b>		
<b>1.2</b>	<b><i>Managing risks</i></b>		
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	•
<b>2</b>	<b>HELICOPTER SAFETY &amp; EMERGENCY PROCEDURES</b>		
<b>2.1</b>	<b><i>Helicopter operations</i></b>		
2.1.1	Identify the most critical phases in helicopter flight operations	L	•
2.1.2	Describe the features of the helicopter transportation suit systems (Pilot, Rescue Specialist, Hoist Operator, and Aircraft Maintenance Engineer)	L	•
2.1.3	Perform the donning of a representative helicopter transportation suit system (Importance of proper fit; storage considerations; burping, etc.)	P1	•
2.1.4	Identify the available Personal Protective Equipment used during helicopter flight operations	L	•
2.1.5	Demonstrate correctly strapping into a four or five point harness, avoiding EUBA-entanglement and incorrect buckle-position	P2	•
2.1.6	Describe the importance of wearing the harness or crew restraint system during all phases of the flight	L	•
<b>2.2</b>	<b><i>Helicopter emergency procedures</i></b>		
2.2.1	Describe the rationale for Helicopter Underwater Egress Training (HUET)	L	•
2.2.2	Identify the four phases of an emergency landing on water (Pre-impact, Impact, Post-impact, and Survival/Rescue)	L	•
2.2.3	Describe the emergency response procedure for aircrew during the pre-impact phase of an emergency landing on water (with and without altitude)	L	•
2.2.4	Describe the rationale for providing early warning to passengers and aircrew for an emergency landing (on land and water)	L	•
2.2.5	Describe the purpose of securing loose items and the brace position during an emergency landing	L	•
2.2.6	Demonstrate the sequence of actions to prepare for an emergency landing on water, including getting watertight while secured in a four or five point harness or crew restraint system (to include low altitude, no warning actions for SAR personnel)	P2	•
2.2.7	Demonstrate the use of available personal safety equipment on board the helicopter	P2	•
2.2.8	Demonstrate the brace-position while secured in a four or five point harness and outfitted with a EUBA	P2	•
2.2.9	Demonstrate a thorough orientation of the helicopter interior during passenger and/or SAR flight operations (primary/secondary exits, cockpit flight controls, passengers, reference points, stretchers, crew restraint anchor points, etc.)	P2	•
2.2.10	Describe the possible consequences and considerations for emergency evacuation / egress if a helicopter is outfitted with crash attenuating seats	L	•
2.2.11	Demonstrate preparing an escape window and emergency exit in accordance with the flight safety card and available instructions	P2	•
2.2.12	Describe when to prepare an escape window and when to actually jettison the window (including advising passengers or aircrew when it is safe to jettison their exits)	L	•

2.2.13	Describe the risks and points of attention of evacuating an upright helicopter	L	•
2.2.14	Describe the evacuation / abandonment briefing provided to passengers or aircrew during the evacuation of an upright helicopter	L	•
2.2.15	Describe the sequence of actions when evacuating an upright helicopter after a controlled surface landing	L	•
2.2.16	Describe the importance of remaining strapped in during a surface evacuation until instructed / ready to exit	L	•
2.2.17	Describe the possible consequences and considerations of being unsecured during the capsize of an upright helicopter (may include pilot standing while coordinating abandonment or SAR personnel extricating casualty or incapacitated crew member)	L	•
<b>2.3</b>	<b>Helicopter emergency equipment</b>		
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 including the advantages and techniques used to marshal rafts together	L	•
2.3.6	Describe the rationale for selecting the port, starboard, or both rafts during the evacuation of an upright helicopter	L	•
2.3.7	Participate in a dry orientation of an aviation raft to include deploying and securing the raft canopy	P2	•
2.3.8	Participate in deploying an aviation raft.	P2	•
2.3.9	Demonstrate immediate and subsequent actions in the aviation raft after the helicopter has been abandoned (possible scenarios could include casualty transfer to the raft or management of injured or incapacitated passenger or crew member)	P2	•
2.3.10	Identify the survival aids available in an aviation raft	L	•
<b>2.4</b>	<b>Helicopter egress</b>		
2.4.1	Describe the importance of waiting with harness or crew restraint system secured for rolling motion to stop (or slow down) and helicopter to fill with water before egressing an inverted helicopter. This includes not breathing on the EUBA device prior to inversion (breath hold)	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, evacuation / abandonment briefing, and command and control of the evacuation (possible scenarios could include casualty transfer to the raft or management of injured or incapacitated passenger or crew member)	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 (primary crew position) requiring exit / window to be jettisoned AFTER impact.	P2	•
	• Breath-hold run		
2.4.6	Perform an unassisted inverted underwater egress from the HUET, while seated next to a closed representative emergency exit / push-out escape window (primary crew position), requiring the window to be jettisoned underwater	P1	•
	• Deploy and use the EUBA in an inverted, submerged situation		

2.4.7	Demonstrate the same egress as 2.4.6 from the opposite side of the HUET (secondary crew position - demonstrate either 2.4.6 or 2.4.7 from a fully stroked seat position. Additional possible scenarios could include removal of mock night vision goggles and/or communications cord disconnect prior to egress)	P2	•
	• Deploy and use the EUBA prior to and/or after inversion		
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 (may include egress from an aisle seat position; cross cabin egress; or cross cockpit egress)	P2	•
	• Deploy and use the EUBA prior to and/or after inversion		
2.4.9	Perform a low-light inverted underwater egress from the HUET, while seated next to a closed representative emergency exit / push-out escape window (primary or secondary crew position), requiring the window to be jettisoned underwater	P2	•
	• Deploy and use the EUBA prior to and/or after inversion		
2.4.10	Perform a blackout (no light) inverted underwater egress from the HUET, while seated next to a closed representative emergency exit / push-out escape window (primary or secondary crew position), requiring the window to be jettisoned underwater	P2	•
	• Deploy and use the EUBA prior to and/or after inversion		
2.4.11	Demonstrate an inverted underwater egress by disconnecting from a crew restraint system and egressing through an already open representative emergency exit / push-out escape window (Rescue Specialists and Hoist Operators only)	P2	•
	• Deploy and use the EUBA prior to and/or after inversion		
2.4.12	Demonstrate an inverted underwater egress by disconnecting from a crew restraint system and egressing through a closed representative emergency exit / push-out escape window, requiring the window to be jettisoned underwater (Rescue Specialists and Hoist Operators only)	P2	•
	• Deploy and use the EUBA prior to and/or after inversion		
2.4.13	Demonstrate when and how to activate an inflatable transportation suit buoyancy system, including the use of available protective features	P2	•
2.4.14	Describe underwater egress considerations with respect to the presence of an auxiliary fuel tank	L	•
<b>2.5</b>	<b>Emergency Underwater Breathing Apparatus (EUBA)</b>		
2.5.1	Describe the rationale for using a compressed air emergency underwater breathing apparatus (EUBA)	L	•
2.5.2	Describe the components, specifications and limitations of the EUBA	L	•
2.5.3	Describe the hazards related to using compressed air under water and the importance of continuous exhaling during underwater ascent	L	•
2.5.4	Describe the procedure for using the EUBA	L	•
2.5.5	Demonstrate a pre-flight inspection of EUBA The procedure for pre-flight inspection of EUBA to the training providers which is required to be incorporated into training. Please refer to Appendix A.	P2	•
2.5.6	Identify potential EUBA malfunctions	L	•

2.5.7	Identify if a EUBA is in the open or closed position and fully charged	L	•
2.5.8	Describe the steps involved in initiating the use of the EUBA while still above the surface	L	•
2.5.9	Describe the steps involved in initiating the use of the EUBA when submerged	L	•
2.5.10	Demonstrate carrying out breathing actions using EUBA in a dry environment	P1	•
2.5.11	Demonstrate the deployment of a EUBA in water	P1	•
2.5.12	Demonstrate clearing the second stage using the purge button in water	P1	•
2.5.13	Demonstrate clearing the second stage using the blast method (through exhaling) in water	P1	•
2.5.14	Demonstrate breathing EUBA bottle to empty in water	P1	•
2.5.15	Demonstrate the correct use of a EUBA while seated in an inverted, submerged situation (surface water). Demonstrate the correct use of a EUBA while seated in an inverted, submerged situation (SWET), activate EUBA prior to the inversion	P1	•
2.5.16	Demonstrate the correct use of a EUBA while seated in an inverted, submerged situation (SWET), activate EUBA after to the inversion	P1	•
<b>3</b>	<b>FIRE SAFETY</b>		
<b>3.1</b>	<b><i>Prevention, detection and control of fire</i></b>		
3.1.1	Describe the proper sequence of actions after detecting a fire	L	•
<b>3.2</b>	<b><i>Fire response</i></b>		
3.2.1	Demonstrate extinguishing a Class B fire using an appropriate handheld extinguisher, demonstrating correct procedure and safe angle of attack	P2	•
<b>3.3</b>	<b><i>Personal escape devices</i></b>		
3.3.1	Demonstrate an escape using a smoke-hood from a low visibility environment while demonstrating the proper technique and establishing reference points	P2	•
<b>4</b>	<b>ABANDONMENT &amp; SURVIVAL</b>		
<b>4.1</b>	<b><i>Emergency preparedness &amp; response</i></b>		
4.1.1	Describe various roles and responsibilities in abandonment situations (including mustering)	L	•
<b>4.2</b>	<b><i>Enemies of survival</i></b>		
4.2.1	Identify threats to, survival, including the physical and mental enemies,	L	•
4.2.2	Describe prioritized actions to reduce threats to survival	L	•
<b>4.3</b>	<b><i>Personal flotation Apparatus</i></b>		
4.3.1	Observe the use of a lifebuoy including deployment, casualty in-water actions and casualty recovery	P3	•
4.3.2	Perform donning a representative immersion suit	P1	•
4.3.3	Demonstrate in-water behaviour while wearing a representative immersion suit	P2	•
<b>4.4</b>	<b><i>Abandonment</i></b>		
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	Demonstrate a descent using escape chute	P2	•
4.4.7	Demonstrate a controlled water entry	P2	•
4.4.8	Demonstrate the use of a rope ladder (embarkation, pilot or Jacobs)	P2	•
4.4.9	Describe the in-water group formations and their importance	L	•
4.4.10	Describe in-water positions intended to reduce heat loss	L	•
4.4.11	Demonstrate in-water group survival formations	P2	•
4.4.12	Demonstrate swimming formations may also include shortening the chain and eyes of the chain. "Eyes of the chain" - the last person in the chain turns on to their stomach/front so they can see in the direction the group is swimming.  "Shorten the chain" - each person places their feet at the waist of the next person (rather than under their arms) when they join the chain – forms a compact chain.	P2	•
4.4.13	Demonstrate the proper step-off technique to be used from height. Trainees must be provided the option to step off at one meter or at the height required by the MED  The intent of competence statement 4.4.14 is to teach students the proper technique for stepping off from a height – arms crossed on the chest and the legs crossed at the ankles. Trainees should be given the option to demonstrate the step off technique from a lower height of 1 meter.  Training providers will ensure the proper technique for step-off from height is taught. Participants should have an opportunity to demonstrate the step-off technique from height or from a lower height of 1 meter. Teaching the step-off technique for low board water entry is not required under the Standard Practice and it should not be taught as it could result in serious injuries if used during a jump from height.	P2	•
4.4.14	Participate in an evacuation at sea, making use of available lifesaving equipment	P2	•
<b>4.5</b>	<b><i>Distress signals</i></b>		
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 using an inert flare	P2	•
<b>5</b>	<b>SURVIVAL CRAFT</b>		
<b>5.1</b>	<b><i>Totally Enclosed Motor Propelled Survival Craft (TEMPSC)</i></b>		
5.1.2	Identify the features of a typical TEMPSC	L	•
5.1.3	Identify different davit systems and launching systems used for TEMPSC (including hook systems)	L	•
5.1.4	Describe the difference between on load and off load release	L	•
5.1.5	Describe the relationship between the self-righting capability of the TEMPSC and the weight-division inside	L	•
5.1.6	Describe the consequences if passengers and equipment in a TEMPSC are not secured	L	•
5.1.7	Identify how a TEMPSC is operated	L	•
5.1.8	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	•



<b>5.2</b>	<b>Life rafts - General</b>		
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	Observe the procedure for righting of a capsized life raft with demonstrator wearing a representative immersion suit	P3	•
5.2.6	Demonstrate boarding a life raft from the water unassisted while wearing an immersion suit	P2	•
5.2.7	Demonstrate boarding a life raft using the buddy system while wearing representative immersion suits	P2	•
5.2.8	Demonstrate a dry life raft-entry from a ladder or other means of descent while wearing an immersion suit	P2	•
5.2.9	Observe a condition check of a life raft	P3	•
5.2.10	Describe the importance of staying in contact with the life raft's painter line when in the water	L	•
5.2.11	Demonstrate an in water rescue of others while maintaining contact with the life raft	P2	•
5.2.12	Demonstrate survival routines in a life raft	P2	•
<b>5.3</b>	<b>Life rafts -Throw overboard</b>		
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 the considerations when moving a life raft container	L	•
5.3.3	Participate in deploying a throw overboard type life raft	P2	•
<b>5.4</b>	<b>Life rafts – Davit launched</b>		
5.4.1	Identify davit launched life rafts on deck	L	•
5.4.2	Describe the steps of davit crane operation  Note: Training providers must ensure that the trainees are informed the operations of the davit crane may differ from facility to facility.	L	•
5.4.3	Describe the functionality of the different lines connected to the davit launched life raft and its container	L	•
5.4.4	Describe that a davit launched life raft can also be launched as a throw overboard type life raft	L	•
5.4.5	Describe how an offload release hook must be operated during a launch	L	•
5.4.6	Describe the actions and precautions to be taken prior to releasing the remote winch-brake from the life raft	L	•
5.4.7	Participate in the launching procedures of a davit-launched life raft	P2	•
<b>6</b>	<b>SEARCH &amp; RESCUE</b>		
<b>6.1</b>	<b>SAR-organization</b>		
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	•
<b>6.2</b>	<b>The rescue</b>		
6.2.1	Identify likely methods of rescue following an emergency in Canadian waters	L	•
6.2.2	Describe the personal preparations to be made before a rescue	L	•
6.2.3	Describe the preparations to be made to the survival craft before a rescue	L	•
6.2.4	Describe the search and rescue equipment available on SAR-helicopters	L	•

6.2.5	Describe how SKAD-deployment may be used during a rescue. (SKAD = Survival Kit Air Droppable)	L	•
6.2.6	Describe the rescue equipment available on offshore installations and standby vessels	L	•
6.2.7	Identify the points of attention when being rescued by a fast rescue boat	L	•
6.2.8	Observe the proper behavior while being rescued by a fast rescue boat with the use of a rescue frame / net	P3	•
6.2.9	Demonstrate a transfer from a TEMPSC to a Fast Rescue Boat	P2	•
6.2.10	Demonstrate a transfer from a Fast Rescue Boat to a vessel	P2	•
6.2.11	Demonstrate a self-rescue from the water to a safe area using a scramble-net or rope ladder (embarkation, pilot or Jacobs)	P2	•

## **12 Survival Craft Coxswain – Competency Standard**

### **12.1 Introduction**

#### **12.1.1 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. This Section provides the competence requirements for the following courses:

Survival Craft Coxswain  
Survival Craft Coxswain - Recurrent

The two courses are closely related and cover similar topics. The intention of this competency standard 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 both courses are captured in Table 1. In addition the following separate Tables are available:

Table 2 – Survival Craft Type Endorsements  
Table 3 – Competence requirements for Survival Craft Coxswain  
Table 4 – Competence requirements for Survival Craft Coxswain - Recurrent

#### **12.1.2 Applies to**

The individuals who are required to take this training are identified within the current Standard Practice, Section 3.5.5. The purpose of this training is to provide designated personnel with the theoretical and practical training that will enable them to take command of rigid and inflatable survival craft during abandonment.

The focus of the survival craft coxswain recurrent course is identical to the survival craft coxswain course. The recurrent course is used to maintain the survival craft coxswain course competencies. As such, the recurrent course content emphasis lies more on the performance criteria and less on the lecture aspects as the underpinning knowledge and understanding is considered a prerequisite of the course. Therefore, the lecture components are typically of shorter duration in the recurrent course

## 12.2 Defining Competence

### 12.2.1 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. The columns on the right in the competence tables include indication of the applicability of the competence statement to the respective course.

### 12.2.2 Competence Type

Activities and lessons that comprise the Survival Craft Coxswain course and its recurrent course 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

### 12.2.3 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 Tables state 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.

## 12.3 Competence Table - Survival Craft Coxswain and Survival Craft Coxswain - Recurrent

Table 1

ID	Competence Statement	Competence Type	Initial Course	Recurrent
<b>1</b>	<b>Emergency Organization On Board</b>			
<b>1.1</b>	<b>Tasks and Responsibilities</b>			
1.1.1	Identify the emergency alarms used on board (ship / installation)	L	•	
1.1.2	Describe a typical emergency abandonment organization on board (ship / installation)	L	•	
1.1.3	Describe the roles, tasks and responsibilities of the survival craft-coxswain team in an abandonment, emphasis on the leadership role of the coxswain before and after the call for abandonment	L	•	•
1.1.4	Identify the need to be familiar with the specific survival craft on the ship / installation (including auxiliary equipment, i.e. life boats life rafts, escape chute etc.)	L	•	
1.1.5	Describe the requirements with regards to survival craft drills & exercises and the role of the coxswain (including auxiliary equipment, i.e. life boats life rafts, escape chute etc.)	L	•	
<b>2</b>	<b>Survival Craft Design &amp; Components</b>			
<b>2.1</b>	<b>General</b>			
2.1.1	Describe different survival craft-types and their characteristics (buoyancy, SOLAS lifesaving requirements for survival craft construction / type approval)	L	•	
2.1.2	Identify the appropriate SOLAS Life Saving requirements and Transport Canada lifesaving appliances regulations/requirements	L	•	
2.1.3	Identify the capacity limitations of survival craft	L	•	
2.1.4	Identify the role of the coxswain in the maintenance requirements for survival craft	L	•	•
<b>2.2</b>	<b>Hull</b>			
2.2.1	Demonstrate a visual integrity-check of the hull and fittings	P2	•	•
2.2.2	Describe the concerns/hazards with liquids (presence of oil/water, etc.) in the bilge / engine compartment	L	•	
2.2.3	Demonstrate a check of the condition of the bilges / engine compartment (presence of oil/water, etc.)	P2	•	•
2.2.4	Demonstrate how to empty the bilges of a survival craft	P2	•	•
2.2.5	Describe when to open or close the drain openings in a survival craft, including the importance of the drain plug procedures	L	•	
<b>2.3</b>	<b>Engine</b>			
2.3.1	Demonstrate locating the fuel, oil pressure and temperature gauges and RPM-indicator, as appropriate	P2	•	•
2.3.2	Demonstrate how to test the proper operation of the throttle, as appropriate	P2	•	•
2.3.3	Demonstrate how to interpret the oil-pressure and temperature readings when the engine is running	P2	•	•
2.3.4	Identify the emergency fuel shut off valve(s) as appropriate to different survival craft, and when to use them	L	•	
2.3.5	Demonstrate pre-start engine-checks (e.g. oil-level, fuel, batteries, accumulators, etc.)	P2	•	•
2.3.6	Describe different starting features found on different engines (e.g. hydraulic start, air start, pre-heating etc.), necessary steps in order to start the engine and actions to take should the engine not start	L	•	
2.3.7	Perform starting and stopping the engine	P1	•	•
2.3.8	Demonstrate the secondary starting method on the survival craft	P2	•	•
2.3.9	Describe the limitations of running the engine when out of the water	L	•	
2.3.10	Describe different engine cooling systems	L	•	

ID	Competence Statement	Competence Type	Initial Course	Recurrent
2.3.11	Identify the cooling problems which may occur in extreme cold or warm waters (including in ice)	L	•	•
<b>2.4</b>	<b><i>Propeller &amp; Rudder</i></b>			
2.4.1	Demonstrate a visual check of the condition of the propeller and rudder	P2	•	•
2.4.2	Demonstrate proper rudder operation and emergency rudder operation	P2	•	•
2.4.3	Describe the steering devices and emergency steering devices found on survival crafts	L	•	
<b>2.5</b>	<b><i>Release System Operation</i></b>			
2.5.1	Describe the working principle of release hooks and their safety features in general	L	•	•
2.5.2	Describe the difference between off-load release and on-load release (including davit launch life raft release system)	L	•	•
2.5.3	Describe in which situations to use the on-load release feature of a release system	L	•	•
2.5.4	Describe the common causes of “un-intentional releases” of various hook types	L	•	•
2.5.5	Perform the safe operation of a hook release system	P1	•	•
2.5.6	Describe hook release failure and emergency release systems (including secondary fall prevention systems)	L	•	•
<b>2.6</b>	<b><i>Fire &amp; Gas Protection</i></b>			
2.6.1	Identify the different types of hand-held extinguishers and when to use each type	L	•	
2.6.2	Describe the importance of closing the survival craft's ventilation, hatches and other openings in case of an abandonment in a fire and/or gas situation (including pressure vacuum valves)	L	•	•
2.6.3	Identify the external water-spray system activation mechanism on a survival craft and when it is to be activated; also noting hazards (e.g. reduced visibility, stability, etc.)	L	•	•
2.6.4	Describe the function of the compressed air system on a survival craft, its limitations and when it is to be activated	L	•	•
2.6.5	Describe abandoning into a survival craft under special arrangements/conditions (e.g. H <sub>2</sub> S, DSV)	L	•	•
2.6.6	Identify the activation mechanism for the compressed air system	L	•	•
2.6.7	Describe the buildup of CO and CO <sub>2</sub> and potential risks	L	•	•
	<b>Inventory &amp; Equipment</b>			
<b>3.1</b>	<b><i>Emergency Equipment</i></b>			
3.1.1	Identify the emergency equipment on board survival craft, as required by SOLAS	L	•	
3.1.2	Demonstrate checking the availability and condition of required emergency equipment and other inventory on board a survival craft, in accordance with SOLAS	P2	•	
3.1.3	Describe how and when to use a drogue or sea-anchor including the decision to break water tight integrity	L	•	•
3.1.4	Demonstrate the ability to stream, trip and retrieve a drogue or sea-anchor	P2	•	•
3.1.5	Describe operation of the search light	L	•	
<b>3.2</b>	<b><i>Signaling Equipment / Location Aids</i></b>			
3.2.1	Demonstrate locating and mounting the radar-reflector and antenna	P3	•	•
3.2.2	Identify life-saving signals as indicated in the 'Illustrated table of life-saving signals' (Ref. IAMSAR / SOLAS, Ch.V)	L	•	
3.2.3	Describe the pyrotechnic signaling equipment found in a survival craft and when to use	L	•	•
3.2.4	Describe the non-pyrotechnic signaling equipment found in a survival craft and when to use	L	•	•
3.2.5	Describe when to use a Search And Rescue Transponder (SART)	L	•	•
3.2.6	Describe when to activate an Emergency Position Indicating Radio Beacon (EPIRB)	L	•	•
<b>3.3</b>	<b><i>External Communications</i></b>			
3.3.1	Describe external communication tools available, and actions should loss of external communication occur	L	•	•
3.3.2	Perform contacting a vessel or station in the vicinity, using a VHF radio, including identification of the emergency channel	P1	•	•

ID	Competence Statement	Competence Type	Initial Course	Recurrent
3.3.3	Describe the basic Standard Marine Communication Phrases and radio etiquette during radio communications	L	•	
	<b>Launching &amp; Recovery</b>			
<b>4.1</b>	<b>General</b>			
4.1.1	Identify the safety considerations for the launching requirements for survival crafts	L	•	
4.1.2	Describe the different launching arrangements used for survival crafts, their operating principles and advantages / disadvantages	L	•	
4.1.3	Describe the points of attention related to the use of davit winches, including limit switches and brake operation	L	•	
4.1.4	Demonstrate safe operation of the winch (hoisting and lowering), both using the winch-motor as well as manually	P2	•	•
4.1.5	Describe the dangers of losing control of the crank-handle, how to avoid this and immediate actions should this occur	L	•	•
<b>4.2</b>	<b>Pre-launch Checks</b>			
4.2.1	Identify hazards resulting from the incident causing the need to abandon the ship/installation which may interfere with a safe launch (e.g. heel/trim, gas, oil, fire, explosions, toxicity)	L	•	•
4.2.2	Identify physical and environmental hazards caused by external conditions which may interfere with a safe launch	L	•	•
4.2.3	Describe launching considerations based on assessed hazards (e.g. radio communications, launch, wait, use secondary station)	L	•	•
4.2.4	Describe checking that mechanical restraints which prevent the accidental launch of the survival craft are removed (if present)	L	•	•
4.2.5	Describe secondary fall prevention systems used to prevent an accidental release from the falls.	L	•	•
4.2.6	Describe water tight integrity checks after embarkation of passengers	L	•	•
4.2.7	Demonstrate pre-launch checks (including verification that the brake-wire is present)	P2	•	•
4.2.8	Demonstrate confirmation (visual and audio) that the immediate launch area is clear and safe	P2	•	•
<b>4.3</b>	<b>Mustering</b>			
4.3.1	Describe the role of the coxswain in mustering (including Personal Protective Equipment (PPE) that should be used)	L	•	•
4.3.2	Describe registering missing/additional crew/passengers reporting at the muster station	L	•	•
4.3.3	Perform reporting status/headcount to command/bridge	P1	•	•
<b>4.4</b>	<b>Embarkation</b>			
4.4.1	Describe coordinating boarding, considering weight-distribution and boarding sequence (including potential for passenger operation of auxiliary equipment)	L	•	•
4.4.2	Describe why all crew/passengers/equipment must be properly seated/secured	L	•	•
<b>4.5</b>	<b>Launching</b>			
4.5.1	Describe the considerations for launch and release of a survival craft into a heavy seas swell (i.e. constant tension on brake, release in a trough, heading, etc.)	L	•	•
4.5.2	Describe hazards when launching a survival craft while a ship / installation is still making headway	L	•	
4.5.3	Describe the use and function of the restraining hardware (including the painter line, pendants, gripes and tricing gear / bowsing tackle)	L	•	
4.5.4	Perform launching a survival craft in a safe manner, in accordance with on board procedures	P1	•	•
<b>4.6</b>	<b>Recovery</b>			
4.6.1	Perform recovering and stowing a survival craft (including proper checks for resetting of the hooks)	P1	•	•
4.6.2	Identify various recovery methods	L	•	•
4.6.3	Demonstrate preparing the survival craft for recovery	P2	•	•



ID	Competence Statement	Competence Type	Initial Course	Recurrent
4.6.4	Describe the reasons for interrupting hoisting once the survival craft is clear of the water / waves (including: boat steady; hydrostatic interlock reset; insert safety pins)	L	•	•
4.6.5	Describe how to recover the survival craft using recovery strops	L	•	
4.6.6	Describe the tasks involved in preparing a survival craft for future use	L	•	
	<b>Operating a Survival craft</b>			
<b>5.1</b>	<b>Boat Control</b>			
5.1.1	Describe the characteristics and behaviour of the survival craft (handling and stability)	L	•	
5.1.2	Describe importance of a continuous awareness of debris and objects in the water (including ice)	L	•	
5.1.3	Describe the difficulty of clearing the weather side of a ship / installation	L	•	
5.1.4	Describe procedure used in a survival craft in rough weather (i.e. optimizing its behaviour by selecting a favorable heading, including considerations of / impact from wind, wave and swell direction)	L	•	•
5.1.5	Perform holding position/heave to	P1	•	•
5.1.6	Perform sailing on a set heading within 20 degrees, including blind steerage	P1	•	•
5.1.7	Perform pacing with a FRB making way, enabling a transfer of people	P1	•	•
<b>5.2</b>	<b>Emergency Boat Handling</b>			
5.2.1	Describe actions in case of engine failure or loss of propulsion at sea	L	•	•
5.2.2	Describe actions in case of a collision (boat, obstacle)	L	•	•
5.2.3	Describe the corrective actions to be taken when the steering fails	L	•	•
5.2.4	Perform operation of the emergency steering system and maintain a course	P1	•	•
<b>5.3</b>	<b>Recovery of Persons in Water</b>			
5.3.1	Describe the considerations for recovering person(s) in the water	L	•	•
5.3.2	Identify different devices that can be used to recover survivors from the water and their limitations	L	•	•
5.3.3	Perform casualty approach / person overboard pick-up	P1	•	•
<b>5.4</b>	<b>Towing</b>			
5.4.1	Describe in what situation towing may be considered	L	•	•
5.4.2	Describe the hazards of a towing operation and the safety measures to take during a tow (including the danger of breaking the water tight integrity)	L	•	•
5.4.3	Describe why a sea-anchor should be retrieved when towing another survival craft away from immediate danger	L	•	
5.4.4	Perform an approach to a survival craft	P1	•	•
5.4.5	Demonstrate connection of a tow operation (for both under tow and towing)	P2	•	•
5.4.6	Perform maneuvers while towing	P1	•	•
5.4.7	Demonstrate proper procedures for being towed	P2	•	•
<b>5.7</b>	<b>Using a Compass</b>			
5.7.1	Describe the use of a compass within a survival craft (recognizing the impact of the steel structure, compass condition, etc.)	L	•	
	<b>The Survival Phase</b>			
<b>6.1</b>	<b>Management &amp; Leadership</b>			
6.1.1	Describe leadership styles, general reaction patterns of passengers and crew in the survival craft	L	•	
6.1.2	Describe how to monitor the condition of people onboard and how to respond (including motivating, encouraging and re-assuring)	L	•	
6.1.3	Demonstrate establishing watchkeeping routines	P2	•	•

ID	Competence Statement	Competence Type	Initial Course	Recurrent
6.1.4	Demonstrate providing appropriate updates of the status of the craft to the rescue authority	P2	•	•
6.1.5	Describe how to recognize and reduce stress in self and others	L	•	
<b>6.2</b>	<b>Organization</b>			
6.2.1	Describe determining the “safe area”	L	•	•
6.2.2	Describe the effects of weather conditions on the safety and detectability of personnel and survival craft	L	•	
6.2.3	Demonstrate how to prepare the survival craft to withstand different weather conditions	P2	•	•
6.2.4	Describe how to organize equipment to be used onboard the survival craft	L	•	•
6.2.5	Describe establishing sanitation procedures onboard the survival craft	L	•	•
6.2.6	Describe establishing routines to ration and issue anti-seasickness tablets, water and emergency food	L	•	•
6.2.7	Describe collecting and storing rainwater	L	•	•
<b>6.3</b>	<b>Habitability</b>			
6.3.1	Describe habitability strategies (related to temperature, air quality, motion sickness, waste management)	L	•	•
6.3.2	Describe the challenges of casualty management in the survival craft	L	•	•
6.3.3	Describe the signs of hypothermia, hyperthermia, carbon dioxide poisoning, dehydration	L	•	•
6.3.4	Describe how to prevent or slow down the development of hypothermia	L	•	•
6.3.5	Describe how to minimize dehydration in hot conditions	L	•	•
<b>6.4</b>	<b>Rescue by Vessel</b>			
6.4.1	Describe the risks involved in transferring people from a survival craft to a ship	L	•	
6.4.2	Identify a rescue zone on a ship	L	•	
6.4.3	Describe different ways of transferring people from a survival craft to a FRB	L	•	
6.4.4	Describe prioritizing of the transfer of people	L	•	•
6.4.5	Describe how to transfer a person in a stretcher from a survival craft to a FRB	L	•	•
<b>6.5</b>	<b>Rescue by Helicopter</b>			
6.5.1	Describe cooperation with a helicopter, following their instructions with reference to maintaining a course to steer and boat handling	L	•	
6.5.2	Describe the importance of grounding the winch-cable during helicopter-operations and how this is achieved	L	•	
6.5.3	Describe methods used by SAR-helicopters to transfer a casualty from the water or from a boat	L	•	
<b>6.6</b>	<b>Beaching</b>			
6.6.1	Describe the risks involved in beaching a survival craft	L	•	
	<b>Operating Davit Launched Life rafts</b>			
<b>7.1</b>	<b>Davit-launched Life rafts</b>			
7.1.1	Describe the operation and arrangements of a single-fall davit, used to launch davit-launched life-rafts	L	•	
7.1.2	Describe the operation of the remote-brake release mechanism of a single-fall davit	L	•	
7.1.3	Describe the function of all lines found on a davit-launched raft and its container	L	•	
7.1.4	Demonstrate preparation of a davit launched life raft for boarding	P2	•	•
7.1.5	Demonstrate how to board and launch a davit-launched life raft	P2	•	•
	<b>Marine Escape Chute</b>			
<b>8.1</b>	<b>Marine Escape Chute</b>			
8.1.1	Describe role of the coxswain in coordinating the operation of marine escape chute (including life raft boarding and surface rescue)	L	•	

ID	Competence Statement	Competence Type	Initial Course	Recurrent
8.1.2	Describe the role of the coxswain in the coordination of any other abandonment options available on their installation	L	•	
<b>9</b>	<b>Operating Survival Crafts in Ice</b>			
<b>9.1</b>	<b>Survival Craft in Ice Prone Waters</b>			
9.1.1	Describe the precautions that must be considered when operating survival craft in low temperatures or ice prone waters.	L	•	•
9.1.2	Describe the precautions to take when abandoning a facility in ice covered waters. (e.g. – ice in launching area, keel cooler/rudder/propeller damage)	L	•	•
9.1.3	Describe the effects of ice accretion on board a survival craft (e.g. stability, vision)	L	•	•
9.1.4	Describe the precautions while maneuvering in sea ice.	L	•	•
9.1.5	Describe the actions to take in the event that a survival craft becomes beset in ice.	L	•	•
9.1.6	Describe the actions to take when being escorted through ice by a ship	L	•	•
9.1.7	Describe additional precautions to be taken when towing or being towed through ice (speed, constant monitoring of the towed vessel by the towing vessel)	L	•	•

The follow competencies are listed such that should an endorsement for survival craft *type* be added to a course certificate there is a requirement that the following competencies be included in the training for the following types.

**Table 2 – Survival Craft Type Endorsements**

CT = Competence Type

I = Initial Training Course

R = Recurrent Training Course

	Competence Statement	CT	I	R
	<b>Preferred Orientation and Displacement Launching Assist (PrOD)</b>			
1	Describe the PrOD system and how it assists the launching of a survival craft	L	•	•
2	Describe the launching process and release of the PrOD after the boat has been released from the falls	L	•	•
3	Describe the emergency release of the PrOD system	L	•	•
4	Demonstrate launching using a PrOD system	P1	•	•
	<b>Single Fall Survival craft Launch</b>			
1	Describe the brake system, lowering process and hook release of the single fall survival craft	L	•	•
2	Describe the emergency release system of a single fall survival craft	L	•	•
3	Describe the auxiliary self-righting system of a single fall survival craft	L	•	•
4	Demonstrate ability to turn single fall survival craft away from the rig on contact with the water	P1	•	•

## 12.4 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:
  - one set of gravity davits to house the survival craft, sited so as to allow launching into the open water and recovery
  - one survival craft fire-protected TEL complying with SOLAS 1974 Chapter III)
  - one davit-launched inflatable life raft with suitable launching arrangements
  - two portable 2-way radiotelephones approved for use in survival craft
  - variety of hand flares, parachute rockets and day smoke signals
  - one demonstration Class 1 emergency position-indicating radio beacon (EPIRB)
  - one demonstration search and rescue transponder (SART)
  - representative stretcher

### **Note: Air Quality Checks in Lifeboats**

As part of the maintenance of lifeboats training providers are required to conduct periodic checks for exhaust leaks. At a minimum, an annual inspection must be conducted. The training provider must be able to demonstrate that an air quality hazard does not exist. Checking the maintenance records for evidence of exhaust checks as part of the maintenance of lifeboats will be added to the course quality review process.

## 12.5 References

- Det Norske Veritas Standard for Certification No. 3.321; *Competence of Lifeboat Coxswains*, October 2009

- In preparing this standard, related training required by OPITO, Transport Canada and STCW was referenced. However, training offered to meet this standard does not automatically provide certificates for OPITO, Transport Canada or STCW.

## 12.6 Competence Table - Survival Craft Coxswain

Table 3

ID	Competence Statement	Competence Type	Initial Course
<b>1</b>	<b>Emergency Organization On Board</b>		
<b>1.1</b>	<b>Tasks and Responsibilities</b>		
1.1.1	Identify the emergency alarms used on board (ship / installation)	L	•
1.1.2	Describe a typical emergency abandonment organization on board (ship / installation)	L	•
1.1.3	Describe the roles, tasks and responsibilities of the survival craft-coxswain team in an abandonment, emphasis on the leadership role of the coxswain before and after the call for abandonment	L	•
1.1.4	Identify the need to be familiar with the specific survival craft on the ship / installation (including auxiliary equipment, i.e. life boats life rafts, escape chute etc.)	L	•
1.1.5	Describe the requirements with regards to survival craft drills & exercises and the role of the coxswain (including auxiliary equipment, i.e. life boats life rafts, escape chute etc.)	L	•
<b>2</b>	<b>Survival Craft Design &amp; Components</b>		
<b>2.1</b>	<b>General</b>		
2.1.1	Describe different survival craft-types and their characteristics (buoyancy, SOLAS lifesaving requirements for survival craft construction / type approval)	L	•
2.1.2	Identify the appropriate SOLAS Life Saving requirements and Transport Canada Lifesaving appliances regulations/requirements	L	•
2.1.3	Identify the capacity limitations of survival craft	L	•
2.1.4	Identify the role of the coxswain in the maintenance requirements for survival craft	L	•
<b>2.2</b>	<b>Hull</b>		
2.2.1	Demonstrate a visual integrity-check of the hull and fittings	P2	•
2.2.2	Describe the concerns/hazards with liquids (presence of oil/water, etc.) in the bilge / engine compartment	L	•
2.2.3	Demonstrate a check of the condition of the bilges / engine compartment (presence of oil/water, etc.)	P2	•
2.2.4	Demonstrate how to empty the bilges of a survival craft	P2	•
2.2.5	Describe when to open or close the drain openings in a survival craft, including the importance of the drain plug procedures	L	•
<b>2.3</b>	<b>Engine</b>		
2.3.1	Demonstrate locating the fuel, oil pressure and temperature gauges and RPM-indicator, as appropriate	P2	•
2.3.2	Demonstrate how to test the proper operation of the throttle, as appropriate	P2	•
2.3.3	Demonstrate how to interpret the oil-pressure and temperature readings when the engine is running	P2	•
2.3.4	Identify the emergency fuel shut off valve(s) as appropriate to different survival craft, and when to use them	L	•
2.3.5	Demonstrate pre-start engine-checks (e.g. oil-level, fuel, batteries, accumulators, etc.)	P2	•
2.3.6	Describe different starting features found on different engines (e.g. hydraulic start, air start, pre-heating etc.), necessary steps in order to start the engine and actions to take should the engine not start	L	•
2.3.7	Perform starting and stopping the engine	P1	•
2.3.8	Demonstrate the secondary starting method on the survival craft	P2	•
2.3.9	Describe the limitations of running the engine when out of the water	L	•
2.3.10	Describe different engine cooling systems	L	•
2.3.11	Identify the cooling problems which may occur in extreme cold or warm waters (including in ice)	L	•
<b>2.4</b>	<b>Propeller &amp; Rudder</b>		

ID	Competence Statement	Competence Type	Initial Course
2.4.1	Demonstrate a visual check of the condition of the propeller and rudder	P2	•
2.4.2	Demonstrate proper rudder operation and emergency rudder operation	P2	•
2.4.3	Describe the steering devices and emergency steering devices found on survival crafts	L	•
<b>2.5</b>	<b>Release System Operation</b>		
2.5.1	Describe the working principle of release hooks and their safety features in general	L	•
2.5.2	Describe the difference between off-load release and on-load release (including davit launch life raft release system)	L	•
2.5.3	Describe in which situations to use the on-load release feature of a release system	L	•
2.5.4	Describe the common causes of “un-intentional releases” of various hook types	L	•
2.5.5	Perform the safe operation of a hook release system	P1	•
2.5.6	Describe hook release failure and emergency release systems (including secondary fall prevention systems)	L	•
<b>2.6</b>	<b>Fire &amp; Gas Protection</b>		
2.6.1	Identify the different types of hand-held extinguishers and when to use each type	L	•
2.6.2	Describe the importance of closing the survival craft's ventilation, hatches and other openings in case of an abandonment in a fire and/or gas situation (including pressure vacuum valves)	L	•
2.6.3	Identify the external water-spray system activation mechanism on a survival craft and when it is to be activated; also noting hazards (e.g. reduced visibility, stability, etc.)	L	•
2.6.4	Describe the function of the compressed air system on a survival craft, its limitations and when it is to be activated	L	•
2.6.5	Describe abandoning into a survival craft under special arrangements/conditions (e.g. H <sub>2</sub> S, DSV)	L	•
2.6.6	Identify the activation mechanism for the compressed air system	L	•
2.6.7	Describe the buildup of CO and CO <sub>2</sub> and potential risks	L	•
	<b>Inventory &amp; Equipment</b>		
<b>3.1</b>	<b>Emergency Equipment</b>		
3.1.1	Identify the emergency equipment on board survival craft, as required by SOLAS	L	•
3.1.2	Demonstrate checking the availability and condition of required emergency equipment and other inventory on board a survival craft, in accordance with SOLAS	P2	•
3.1.3	Describe how and when to use a drogue or sea-anchor including the decision to break water tight integrity	L	•
3.1.4	Demonstrate the ability to stream, trip and retrieve a drogue or sea-anchor	P2	•
3.1.5	Describe operation of the search light	L	•
<b>3.2</b>	<b>Signaling Equipment / Location Aids</b>		
3.2.1	Demonstrate locating and mounting the radar-reflector and antenna	P3	•
3.2.2	Identify life-saving signals as indicated in the 'Illustrated table of life-saving signals' (Ref. IAMSAR / SOLAS, Ch.V)	L	•
3.2.3	Describe the pyrotechnic signaling equipment found in a survival craft and when to use	L	•
3.2.4	Describe the non-pyrotechnic signaling equipment found in a survival craft and when to use	L	•
3.2.5	Describe when to use a Search And Rescue Transponder (SART)	L	•
3.2.6	Describe when to activate an Emergency Position Indicating Radio Beacon (EPIRB)	L	•
<b>3.3</b>	<b>External Communications</b>		
3.3.1	Describe external communication tools available, and actions should loss of external communication occur	L	•
3.3.2	Perform contacting a vessel or station in the vicinity, using a VHF radio, including identification of the emergency channel	P1	•
3.3.3	Describe the basic Standard Marine Communication Phrases and radio etiquette during radio communications	L	•

ID	Competence Statement	Competence Type	Initial Course
	<b>Launching &amp; Recovery</b>		
<b>4.1</b>	<b>General</b>		
4.1.1	Identify the safety considerations for the launching requirements for survival crafts	L	•
4.1.2	Describe the different launching arrangements used for survival crafts, their operating principles and advantages / disadvantages	L	•
4.1.3	Describe the points of attention related to the use of davit winches, including limit switches and brake operation	L	•
4.1.4	Demonstrate safe operation of the winch (hoisting and lowering), both using the winch-motor as well as manually	P2	•
4.1.5	Describe the dangers of losing control of the crank-handle, how to avoid this and immediate actions should this occur	L	•
<b>4.2</b>	<b>Pre-launch Checks</b>		
4.2.1	Identify hazards resulting from the incident causing the need to abandon the ship/installation which may interfere with a safe launch (e.g. heel/trim, gas, oil, fire, explosions, toxicity)	L	•
4.2.2	Identify physical and environmental hazards caused by external conditions which may interfere with a safe launch	L	•
4.2.3	Describe launching considerations based on assessed hazards (e.g. radio communications, launch, wait, use secondary station)	L	•
4.2.4	Describe checking that mechanical restraints which prevent the accidental launch of the survival craft are removed (if present)	L	•
4.2.5	Describe secondary fall prevention systems used to prevent an accidental release from the falls.	L	•
4.2.6	Describe water tight integrity checks after embarkation of passengers	L	•
4.2.7	Demonstrate pre-launch checks (including verification that the brake-wire is present)	P2	•
4.2.8	Demonstrate confirmation (visual and audio) that the immediate launch area is clear and safe	P2	•
<b>4.3</b>	<b>Mustering</b>		
4.3.1	Describe the role of the coxswain in mustering (including Personal Protective Equipment (PPE) that should be used)	L	•
4.3.2	Describe registering missing/additional crew/passengers reporting at the muster station	L	•
4.3.3	Perform reporting status/headcount to command/bridge	P1	•
<b>4.4</b>	<b>Embarkation</b>		
4.4.1	Describe coordinating boarding, considering weight-distribution and boarding sequence (including potential for passenger operation of auxiliary equipment)	L	•
4.4.2	Describe why all crew/passengers/equipment must be properly seated/secured	L	•
<b>4.5</b>	<b>Launching</b>		
4.5.1	Describe the considerations for launch and release of a survival craft into a heavy seas swell (i.e. constant tension on brake, release in a trough, heading, etc.)	L	•
4.5.2	Describe hazards when launching a survival craft while a ship / installation is still making headway	L	•
4.5.3	Describe the use and function of the restraining hardware (including the painter line, pendants, gripes and tricing gear / bowsing tackle)	L	•
4.5.4	Perform launching a survival craft in a safe manner, in accordance with on board procedures	P1	•
<b>4.6</b>	<b>Recovery</b>		
4.6.1	Perform recovering and stowing a survival craft (including proper checks for resetting of the hooks)	P1	•
4.6.2	Identify various recovery methods	L	•
4.6.3	Demonstrate preparing the survival craft for recovery	P2	•
4.6.4	Describe the reasons for interrupting hoisting once the survival craft is clear of the water / waves (including: boat steady; hydrostatic interlock reset; insert safety pins)	L	•
4.6.5	Describe how to recover the survival craft using recovery strops	L	•



ID	Competence Statement	Competence Type	Initial Course
4.6.6	Describe the tasks involved in preparing a survival craft for future use	L	•
	<b>Operating a Survival craft</b>		
<b>5.1</b>	<b>Boat Control</b>		
5.1.1	Describe the characteristics and behaviour of the survival craft (handling and stability)	L	•
5.1.2	Describe importance of a continuous awareness of debris and objects in the water (including ice)	L	•
5.1.3	Describe the difficulty of clearing the weather side of a ship / installation	L	•
5.1.4	Describe procedure used in a survival craft in rough weather (i.e. optimizing its behaviour by selecting a favorable heading, including considerations of / impact from wind, wave and swell direction)	L	•
5.1.5	Perform holding position/heave to	P1	•
5.1.6	Perform sailing on a set heading within 20 degrees, including blind steerage	P1	•
5.1.7	Perform pacing with a FRB making way, enabling a transfer of people	P1	•
<b>5.2</b>	<b>Emergency Boat Handling</b>		
5.2.1	Describe actions in case of engine failure or loss of propulsion at sea	L	•
5.2.2	Describe actions in case of a collision (boat, obstacle)	L	•
5.2.3	Describe the corrective actions to be taken when the steering fails	L	•
5.2.4	Perform operation of the emergency steering system and maintain a course	P1	•
<b>5.3</b>	<b>Recovery of Persons in Water</b>		
5.3.1	Describe the considerations for recovering person(s) in the water	L	•
5.3.2	Identify different devices that can be used to recover survivors from the water and their limitations	L	•
5.3.3	Perform casualty approach / person overboard pick-up	P1	•
<b>5.4</b>	<b>Towing</b>		
5.4.1	Describe in what situation towing may be considered	L	•
5.4.2	Describe the hazards of a towing operation and the safety measures to take during a tow (including the danger of breaking the water tight integrity)	L	•
5.4.3	Describe why a sea-anchor should be retrieved when towing another survival craft away from immediate danger	L	•
5.4.4	Perform an approach to a survival craft	P1	•
5.4.5	Demonstrate connection of a tow operation (for both under tow and towing)	P2	•
5.4.6	Perform maneuvers while towing	P1	•
5.4.7	Demonstrate proper procedures for being towed	P2	•
<b>5.7</b>	<b>Using a Compass</b>		
5.7.1	Describe the use of a compass within a survival craft (recognizing the impact of the steel structure, compass condition, etc.)	L	•
	<b>The Survival Phase</b>		
<b>6.1</b>	<b>Management &amp; Leadership</b>		
6.1.1	Describe leadership styles, general reaction patterns of passengers and crew in the survival craft	L	•
6.1.2	Describe how to monitor the condition of people onboard and how to respond (including motivating, encouraging and re-assuring)	L	•
6.1.3	Demonstrate establishing watchkeeping routines	P2	•
6.1.4	Demonstrate providing appropriate updates of the status of the craft to the rescue authority	P2	•
6.1.5	Describe how to recognize and reduce stress in self and others	L	•
<b>6.2</b>	<b>Organization</b>		

ID	Competence Statement	Competence Type	Initial Course
6.2.1	Describe determining the “safe area”	L	•
6.2.2	Describe the effects of weather conditions on the safety and detectability of personnel and survival craft	L	•
6.2.3	Demonstrate how to prepare the survival craft to withstand different weather conditions	P2	•
6.2.4	Describe how to organize equipment to be used onboard the survival craft	L	•
6.2.5	Describe establishing sanitation procedures onboard the survival craft	L	•
6.2.6	Describe establishing routines to ration and issue anti-seasickness tablets, water and emergency food	L	•
6.2.7	Describe collecting and storing rainwater	L	•
<b>6.3</b>	<b>Habitability</b>		
6.3.1	Describe habitability strategies (related to temperature, air quality, motion sickness, waste management)	L	•
6.3.2	Describe the challenges of casualty management in the survival craft	L	•
6.3.3	Describe the signs of hypothermia, hyperthermia, carbon dioxide poisoning, dehydration	L	•
6.3.4	Describe how to prevent or slow down the development of hypothermia	L	•
6.3.5	Describe how to minimize dehydration in hot conditions	L	•
<b>6.4</b>	<b>Rescue by Vessel</b>		
6.4.1	Describe the risks involved in transferring people from a survival craft to a ship	L	•
6.4.2	Identify a rescue zone on a ship	L	•
6.4.3	Describe different ways of transferring people from a survival craft to a FRB	L	•
6.4.4	Describe prioritizing of the transfer of people	L	•
6.4.5	Describe how to transfer a person in a stretcher from a survival craft to a FRB	L	•
<b>6.5</b>	<b>Rescue by Helicopter</b>		
6.5.1	Describe cooperation with a helicopter, following their instructions with reference to maintaining a course to steer and boat handling	L	•
6.5.2	Describe the importance of grounding the winch-cable during helicopter-operations and how this is achieved	L	•
6.5.3	Describe methods used by SAR-helicopters to transfer a casualty from the water or from a boat	L	•
<b>6.6</b>	<b>Beaching</b>		
6.6.1	Describe the risks involved in beaching a survival craft	L	•
	<b>Operating Davit Launched Life rafts</b>		
<b>7.1</b>	<b>Davit-launched Life rafts</b>		
7.1.1	Describe the operation and arrangements of a single-fall davit, used to launch davit-launched life rafts	L	•
7.1.2	Describe the operation of the remote-brake release mechanism of a single-fall davit	L	•
7.1.3	Describe the function of all lines found on a davit-launched raft and its container	L	•
7.1.4	Demonstrate preparation of a davit launched life raft for boarding	P2	•
7.1.5	Demonstrate how to board and launch a davit-launched life raft	P2	•
	<b>Marine Escape Chute</b>		
<b>8.1</b>	<b>Marine Escape Chute</b>		
8.1.1	Describe role of the coxswain in coordinating the operation of marine escape chute (including life raft boarding and surface rescue)	L	•
8.1.2	Describe the role of the coxswain in the coordination of any other abandonment options available on their installation	L	•
<b>9</b>	<b>Operating Survival Crafts in Ice</b>		
<b>9.1</b>	<b>Survival Craft in Ice Prone Waters</b>		

ID	Competence Statement	Competence Type	Initial Course
9.1.1	Describe the precautions that must be considered when operating survival craft in low temperatures or ice prone waters.	L	•
9.1.2	Describe the precautions to take when abandoning a facility in ice covered waters. (e.g. – ice in launching area, keel cooler/rudder/propeller damage)	L	•
9.1.3	Describe the effects of ice accretion on board a survival craft (e.g. stability, vision)	L	•
9.1.4	Describe the precautions while maneuvering in sea ice.	L	•
9.1.5	Describe the actions to take in the event that a survival craft becomes beset in ice.	L	•
9.1.6	Describe the actions to take when being escorted through ice by a ship	L	•
9.1.7	Describe additional precautions to be taken when towing or being towed through ice (speed, constant monitoring of the towed vessel by the towing vessel)	L	•

## 12.7 Competence Table - Survival Craft Coxswain - Recurrent

Table 4

ID	Competence Statement	Competence Type	Recurrent
<b>1</b>	<b><i>Emergency Organization On Board</i></b>		
<b>1.1</b>	<b><i>Tasks and Responsibilities</i></b>		
1.1.1	Describe the roles, tasks and responsibilities of the survival craft-coxswain team in an abandonment, emphasis on the leadership role of the coxswain before and after the call for abandonment	L	•
<b>2</b>	<b>Survival Craft Design &amp; Components</b>		
<b>2.1</b>	<b><i>General</i></b>		
2.1.1	Identify the role of the coxswain in the maintenance requirements for survival craft	L	•
<b>2.2</b>	<b><i>Hull</i></b>		
2.2.1	Demonstrate a visual integrity-check of the hull and fittings	P2	•
2.2.2	Demonstrate a check of the condition of the bilges / engine compartment (presence of oil/water, etc.)	P2	•
2.2.3	Demonstrate how to empty the bilges of a survival craft	P2	•
<b>2.3</b>	<b><i>Engine</i></b>		
2.3.1	Demonstrate locating the fuel, oil pressure and temperature gauges and RPM-indicator, as appropriate	P2	•
2.3.2	Demonstrate how to test the proper operation of the throttle, as appropriate	P2	•
2.3.3	Demonstrate how to interpret the oil-pressure and temperature readings when the engine is running	P2	•
2.3.4	Demonstrate pre-start engine-checks (e.g. oil-level, fuel, batteries, accumulators, etc.)	P2	•
2.3.5	Perform starting and stopping the engine	P1	•
2.3.6	Demonstrate the secondary starting method on the survival craft	P2	•
2.3.7	Identify the cooling problems which may occur in extreme cold or warm waters (including in ice)	L	•
<b>2.4</b>	<b><i>Propeller &amp; Rudder</i></b>		
2.4.1	Demonstrate a visual check of the condition of the propeller and rudder	P2	•
2.4.2	Demonstrate proper rudder operation and emergency rudder operation	P2	•
<b>2.5</b>	<b><i>Release System Operation</i></b>		
2.5.1	Describe the working principle of release hooks and their safety features in general	L	•
2.5.2	Describe the difference between off-load release and on-load release (including davit launch life raft release system)	L	•
2.5.3	Describe in which situations to use the on-load release feature of a release system	L	•
2.5.4	Describe the common causes of “un-intentional releases” of various hook types	L	•
2.5.5	Perform the safe operation of a hook release system	P1	•
2.5.6	Describe hook release failure and emergency release systems (including secondary fall prevention systems)	L	•
<b>2.6</b>	<b><i>Fire &amp; Gas Protection</i></b>		
2.6.1	Describe the importance of closing the survival craft's ventilation, hatches and other openings in case of an abandonment in a fire and/or gas situation (including pressure vacuum valves)	L	•
2.6.2	Identify the external water-spray system activation mechanism on a survival craft and when it is to be activated; also noting hazards (e.g. reduced visibility, stability, etc.)	L	•
2.6.3	Describe the function of the compressed air system on a survival craft, its limitations and when it is to be activated	L	•

ID	Competence Statement	Competence Type	Recurrent
2.6.4	Describe abandoning into a survival craft under special arrangements/conditions (e.g. H <sub>2</sub> S, DSV)	L	•
2.6.5	Identify the activation mechanism for the compressed air system	L	•
2.6.6	Describe the buildup of CO and CO <sub>2</sub> and potential risks	L	•
<b>Inventory &amp; Equipment</b>			
<b>3.1</b>	<b>Emergency Equipment</b>		
3.1.1	Describe how and when to use a drogue or sea-anchor including the decision to break water tight integrity	L	•
3.1.2	Demonstrate the ability to stream, trip and retrieve a drogue or sea-anchor	P2	•
<b>3.2</b>	<b>Signaling Equipment / Location Aids</b>		
3.2.1	Demonstrate locating and mounting the radar-reflector and antenna	P3	•
3.2.2	Describe the pyrotechnic signaling equipment found in a survival craft and when to use	L	•
3.2.3	Describe the non-pyrotechnic signaling equipment found in a survival craft and when to use	L	•
3.2.4	Describe when to use a Search And Rescue Transponder (SART)	L	•
3.2.5	Describe when to activate an Emergency Position Indicating Radio Beacon (EPIRB)	L	•
<b>3.3</b>	<b>External Communications</b>		
3.3.1	Describe external communication tools available, and actions should loss of external communication occur	L	•
3.3.2	Perform contacting a vessel or station in the vicinity, using a VHF radio, including identification of the emergency channel	P1	•
<b>Launching &amp; Recovery</b>			
<b>4.1</b>	<b>General</b>		
4.1.1	Demonstrate safe operation of the winch (hoisting and lowering), both using the winch-motor as well as manually	P2	•
4.1.2	Describe the dangers of losing control of the crank-handle, how to avoid this and immediate actions should this occur	L	•
<b>4.2</b>	<b>Pre-launch Checks</b>		
4.2.1	Identify hazards resulting from the incident causing the need to abandon the ship/installation which may interfere with a safe launch (e.g. heel/trim, gas, oil, fire, explosions, toxicity)	L	•
4.2.2	Identify physical and environmental hazards caused by external conditions which may interfere with a safe launch	L	•
4.2.3	Describe launching considerations based on assessed hazards (e.g. radio communications, launch, wait, use secondary station)	L	•
4.2.4	Describe checking that mechanical restraints which prevent the accidental launch of the survival craft are removed (if present)	L	•
4.2.5	Describe secondary fall prevention systems used to prevent an accidental release from the falls.	L	•
4.2.6	Describe water tight integrity checks after embarkation of passengers	L	•
4.2.7	Demonstrate pre-launch checks (including verification that the brake-wire is present)	P2	•
4.2.8	Demonstrate confirmation (visual and audio) that the immediate launch area is clear and safe	P2	•
<b>4.3</b>	<b>Mustering</b>		
4.3.1	Describe the role of the coxswain in mustering (including Personal Protective Equipment (PPE) that should be used)	L	•
4.3.2	Describe registering missing/additional crew/passengers reporting at the muster station	L	•
4.3.3	Perform reporting status/headcount to command/bridge	P1	•
<b>4.4</b>	<b>Embarkation</b>		
4.4.1	Describe coordinating boarding, considering weight-distribution and boarding sequence (including potential for passenger operation of auxiliary equipment)	L	•

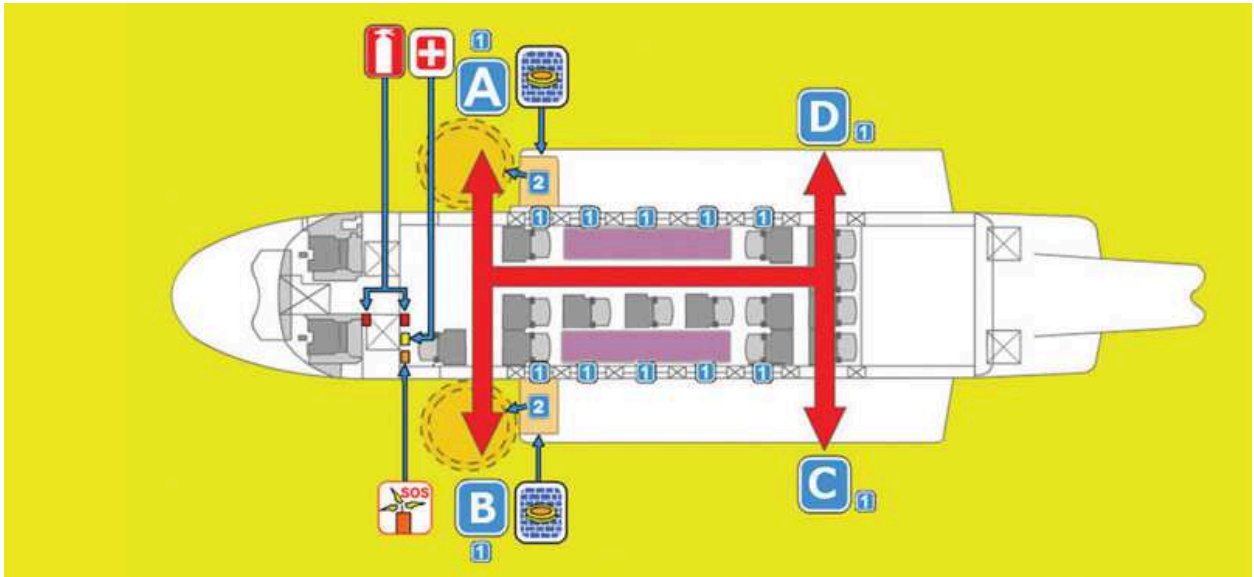
ID	Competence Statement	Competence Type	Recurrent
4.4.2	Describe why all crew/passengers/equipment must be properly seated/secured	L	•
<b>4.5</b>	<b>Launching</b>		
4.5.1	Describe the considerations for launch and release of a survival craft into a heavy seas swell (i.e. constant tension on brake, release in a trough, heading, etc.)	L	•
4.5.2	Perform launching a survival craft in a safe manner, in accordance with on board procedures	P1	•
<b>4.6</b>	<b>Recovery</b>		
4.6.1	Perform recovering and stowing a survival craft (including proper checks for resetting of the hooks)	P1	•
4.6.2	Identify various recovery methods	L	•
4.6.3	Demonstrate preparing the survival craft for recovery	P2	•
4.6.4	Describe the reasons for interrupting hoisting once the survival craft is clear of the water / waves (including: boat steady; hydrostatic interlock reset; insert safety pins)	L	•
	<b>Operating a Survival craft</b>		
<b>5.1</b>	<b>Boat Control</b>		
5.1.1	Describe procedure used in a survival craft in rough weather (i.e. optimizing its behaviour by selecting a favorable heading, including considerations of / impact from wind, wave and swell direction)	L	•
5.1.2	Perform holding position/heave to	P1	•
5.1.3	Perform sailing on a set heading within 20 degrees, including blind steerage	P1	•
5.1.4	Perform pacing with a FRB making way, enabling a transfer of people	P1	•
<b>5.2</b>	<b>Emergency Boat Handling</b>		
5.2.1	Describe actions in case of engine failure or loss of propulsion at sea	L	•
5.2.2	Describe actions in case of a collision (boat, obstacle)	L	•
5.2.3	Describe the corrective actions to be taken when the steering fails	L	•
5.2.4	Perform operation of the emergency steering system and maintain a course	P1	•
<b>5.3</b>	<b>Recovery of Persons in Water</b>		
5.3.1	Describe the considerations for recovering person(s) in the water	L	•
5.3.2	Identify different devices that can be used to recover survivors from the water and their limitations	L	•
5.3.3	Perform casualty approach / person overboard pick-up	P1	•
<b>5.4</b>	<b>Towing</b>		
5.4.1	Describe in what situation towing may be considered	L	•
5.4.2	Describe the hazards of a towing operation and the safety measures to take during a tow (including the danger of breaking the water tight integrity)	L	•
5.4.3	Perform an approach to a survival craft	P1	•
5.4.4	Demonstrate connection of a tow operation (for both under tow and towing)	P2	•
5.4.5	Perform maneuvers while towing	P1	•
5.4.6	Demonstrate proper procedures for being towed	P2	•
	<b>The Survival Phase</b>		
<b>6.1</b>	<b>Management &amp; Leadership</b>		
6.1.1	Demonstrate establishing watchkeeping routines	P2	•
6.1.2	Demonstrate providing appropriate updates of the status of the craft to the rescue authority	P2	•
<b>6.2</b>	<b>Organization</b>		
6.2.1	Describe determining the "safe area"	L	•

ID	Competence Statement	Competence Type	Recurrent
6.2.2	Demonstrate how to prepare the survival craft to withstand different weather conditions	P2	•
6.2.3	Describe how to organize equipment to be used onboard the survival craft	L	•
6.2.4	Describe establishing sanitation procedures onboard the survival craft	L	•
6.2.5	Describe establishing routines to ration and issue anti-seasickness tablets, water and emergency food	L	•
6.2.6	Describe collecting and storing rainwater	L	•
<b>6.3</b>	<b><i>Habitability</i></b>		
6.3.1	Describe habitability strategies (related to temperature, air quality, motion sickness, waste management)	L	•
6.3.2	Describe the challenges of casualty management in the survival craft	L	•
6.3.3	Describe the signs of hypothermia, hyperthermia, carbon dioxide poisoning, dehydration	L	•
6.3.4	Describe how to prevent or slow down the development of hypothermia	L	•
6.3.5	Describe how to minimize dehydration in hot conditions	L	•
<b>6.4</b>	<b><i>Rescue by Vessel</i></b>		
6.4.1	Describe prioritizing of the transfer of people	L	•
6.4.2	Describe how to transfer a person in a stretcher from a survival craft to a FRB	L	•
	<b>Operating Davit Launched Life rafts</b>		
<b>7.1</b>	<b><i>Davit-launched Life rafts</i></b>		
7.1.1	Demonstrate preparation of a davit launched life raft for boarding	P2	•
7.1.2	Demonstrate how to board and launch a davit-launched life raft	P2	•
<b>8</b>	<b>Operating Survival Crafts in Ice</b>		
<b>8.1</b>	<b><i>Survival Craft in Ice Prone Waters</i></b>		
8.1.1	Describe the precautions that must be considered when operating survival craft in low temperatures or ice prone waters.	L	•
8.1.2	Describe the precautions to take when abandoning a facility in ice covered waters. (e.g. – ice in launching area, keel cooler/rudder/propeller damage)	L	•
8.1.3	Describe the effects of ice accretion on board a survival craft (e.g. stability, vision)	L	•
8.1.4	Describe the precautions while maneuvering in sea ice.	L	•
8.1.5	Describe the actions to take in the event that a survival craft becomes beset in ice.	L	•
8.1.6	Describe the actions to take when being escorted through ice by a ship	L	•
8.1.7	Describe additional precautions to be taken when towing or being towed through ice (speed, constant monitoring of the towed vessel by the towing vessel)	L	•





### 13 Seat (Dual auxiliary fuel tanks)



## 14 Appendix B Safety Briefing card, which show the location of the Single Auxiliary Fuel Tank



**D**

**1** **EMERGENCY WINDOW**  
**HUBLOT D'URGENCE**

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**SIKORSKY S-92**

**REAR FACING**  
SIÈGE VERS L'ARRIÈRE

**FORWARD FACING**  
SIÈGE VERS L'AVANT

**ATTENTION**  
DO NOT INFLATE UNTIL  
CLEAR OF THE AIRCRAFT  
NE PAS GONFLER AVANT  
DE SORTIR DE L'APERONE

## 16 Appendix D HUEBA Pre-flight inspection



### HPTSS heliport procedure

Document #: HP.SOP.174  
Revision #: 4  
Date: March 02, 2017  
Page number: 45 of 72 PAGES

#### DONNING (STEP 4)

Prior to fitting the HUEBA into the pocket, perform the below described OEM procedure. It is recommended to conduct these further checks at the time of fitting the HUEBA to the passenger, but if preferred (to be determined by operator and / or helicopter service provider), they can be conducted at any time on the day of travel, prior to travel

- Turn the unit on (turn knob fully counter-clockwise/left then back a quarter of a turn).
- Confirm that the pressure gauge reading is full (i.e. needle is within the green zone).



- Briefly (i.e. 1/2 second only) depress and release the purge button to confirm air flow.
- Listen carefully for any air leaks.

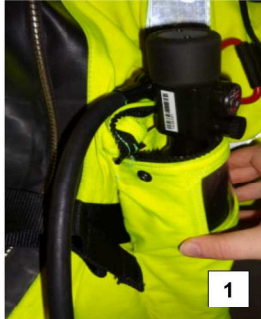
NOTE: In case a passenger makes multiple flights on the same day (e.g. intervention flights), the last 2 bullet points (referring to the purge test) only need to be conducted once, at the time as recommended above, provided the same HUEBA is used by the same passenger and remains under the passenger's control

**IF ANY OF THESE CHECKS FAIL, RETURN HUEBA TO SURVITEC SERVICE SITE  
AND SELECT A DIFFERENT HUEBA FOR USE**

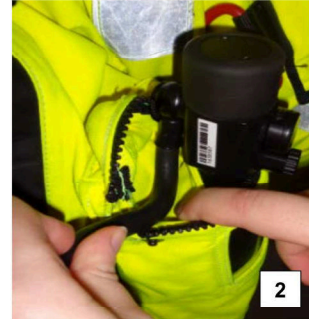


#### DONNING (STEP 4)

Heliport Suit Technician shall have each person identify themselves so that the correct HUEBA can be given, based on the passenger's name.



Place the HUEBA into the **OUTER** pocket nearly all the way, just leaving the gauge and first stage regulator above the pocket entry zipper (Figure 1). The hose should point towards the passenger's chest and the gauge should point outwards towards the plastic window. Take the hose end and feed it into the **INNER** pocket (Figure 2)



Continue feeding the hose into the inner pocket (Figure 3). Until the majority of the hose is positioned inside the pocket (Figure 4)



## DONNING (STEP 4)



Insert the HUEBA all the way into the pocket, such that the gauge is visible through the window. (Figure 1). This may cause the hose directly behind the first stage regulator to curl up (Figure 2)



If this is the case, ensure that the curled up piece is adjusted down into the pocket (Figure 3). Then close the zipper and secure the zipper tab with the snap fastener (Figure 4)



**DONNING (STEP 4)**



Install the HUEBA mouthpiece retainer (with HUEBA mouthpiece inserted) to the LPU snap (Figure 1)

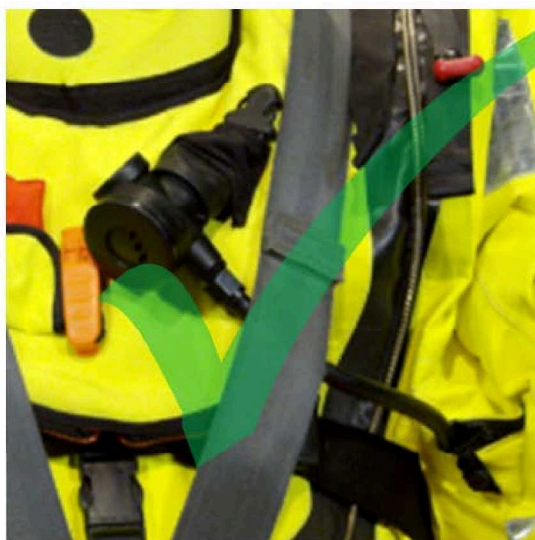
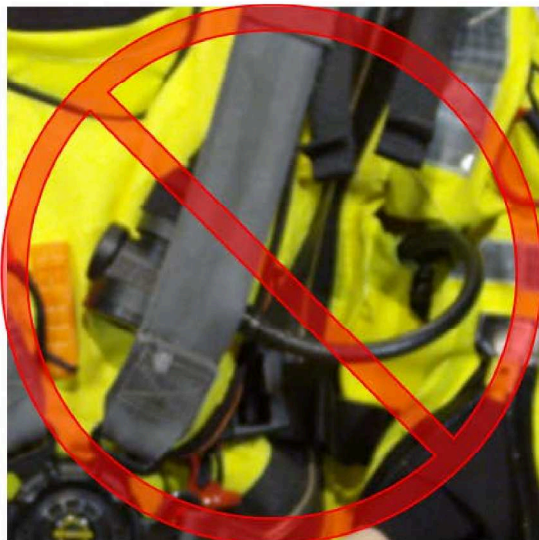
**Suit room staff carry the final suit check responsibility prior to the passenger(s) walking out to the helicopter**

**THE PASSENGER IS NOW READY FOR TRANSPORT**

**GENERAL NOTE**

**SAFETY CAREPOINT**

WHEN THE PASSENGER IS SEATED IN THE HELICOPTER, ENSURE THE SEATBELT DOES NOT COVER THE HUEBA MOUTHPIECE. THE MOUTHPIECE SHOULD BE ON THE INSIDE OF THE SEATBELT, NOT UNDERNEATH.





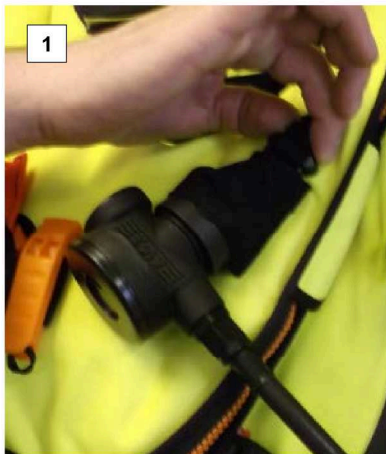
## DOFFING (STEP 5)

### CAUTION

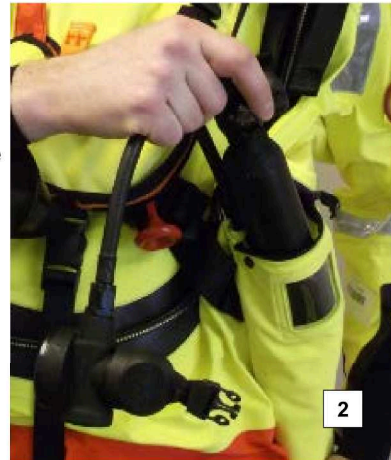
MAKE SURE THAT UNDERGARMENTS ARE NOT CAUGHT IN THE TEETH. DO NOT FORCE A SLIDING FASTENER IF IT JAMS DURING OPENING AS THIS COULD CAUSE DAMAGE TO THE SUIT.

The mitts should never be donned during regular flight activity, but in case the mitts were donned prior to arrival, open the sliding fasteners on the sleeves and take the hands out of the mitts.

In case the hood was donned prior to arrival, open the sliding fastener on the hood.



The Heliport Suit Technician will remove the HUEBA mouthpiece retainer (with mouthpiece attached) from the LPU by means of releasing the clip (Figure 1), then open the HUEBA pocket zipper and remove the HUEBA from the pocket (Figure 2) and place it into the HUEBA carrying bin (to prevent damage)



## 17 Appendix D Using your HUEBA in Emergency Situations



# HUEBA: Using your HUEBA in Emergency Situations



**HTPSS**  
Survival Suit

1

Grasp the second stage regulator on left shoulder



2



Pull second stage regulator clear of its dust cover and the hose clear from the suit

3

Place second stage regulator in your mouth and form a seal, using your lips on the outside of the mouthpiece. Support the demand valve in your mouth.



4



When underwater blow forcefully through the mouthpiece to clear the water from the demand valve. If you are unable to clear the second stage regulator with a forceful breath you can use the purge button. The use of the purge button should be kept to a minimum as it decreases the endurance of the unit.

5

Once you have cleared the unit you can inhale air from the system while completing your escape. Remember to breath both in and out only through your mouth.



6

Remember to breath out on the way to the surface.



Version 1 - Sep 2015



	Level	Level 1	Level 2	Level 3	Level 4	Level 5
<div>Well Control Training Matrix</div> <div>Description - Type of Course</div> <div>CR: Classroom course or on the job mentored program. OM: Online modules which includes self-assessment quizzes. WS: workshop seminars and simulations.</div>	Description	Awareness	Introductory	Fundamental	Supervisory	Enhanced Supervisory and Engineering
	Applicable to personnel	Contribute to a well project	Indirectly influence well control operations from a monitoring, observing, reporting perspective	Operate well control equipment and take direct corrective first action in responding to a well control event	Conduct oversight, of well activities and who analyze, anticipate, plan and verify next steps to be taken in a well control event	Engage in well design, approval, or are in a senior decision making capacity in well execution programs
	Learning Method	OM or CR	OM or CR	OM or CR	OM or CR	WS or CR
	Duration (days)	0.5	2	5	5	2
	Formal Assessment	Online Learning Check	Examination	Examination and Practical	Examination and Practical	Participation
	Repeat Frequency	No repeat	5 years	2 years	2 years	4 years
	Accreditation Required	No	Yes	Yes	Yes	No
	Training Requirement	Combined Activity	Applicable Drilling and / or Well Intervention Activity			
ONSHORE - OPERATOR	ONSHORE - OPERATOR					
Drilling & Intervention <sup>(1)</sup> Manager	Drilling & Intervention(1) Manager					✓
Drilling & Intervention Engineering and Operations Support	Drilling & Intervention Superintendent, Senior Engineer, Operations Engineer				✓	✓
Engineering, Operations & Subsurface Support	Operations Geologist,Petroleum Engineer / Formation Evaluation Specialist		✓			
Ancillary Operations Support	Health, Safety and Environment (HS&E) Advisor, Production Engineer, Logistics Coordinator	✓				
ONSHORE - RIG CONTRACTOR	ONSHORE RIG CONTRACTOR					
	Level	Level 1 Awareness	Level 2 Introductory	Level 3 Fundamental	Level 4 Supervisory	Level 5 Enhanced Supervisory and Engineering
Rig Contractor Management	Rig Manager				✓	✓
	Assistant Rig Manager				✓	
OFFSHORE - OPERATOR	Well-site - OPERATOR					
Drilling & Intervention Supervisor	Drilling & Intervention Supervisor				✓	✓
Engineering, Operations & Subsurface Support	Drilling & Intervention Engineer, Operations Geologist, Petroleum Engineer/ Formation		✓			

	Evaluation Specialist, Production Supervisor					
Ancillary Operations Support	Logistics Coordinator, Production Staff	✓				
<b>OFFSHORE - ADMINISTRATION</b>	<b>Well-site - RIG ADMINISTRATION</b>					
Offshore Installation Manager	Offshore Installation Managers (Drilling/Production/Both)		✓ <sup>(2)</sup>			
Ancillary Rig Support	Health, Safety and Environment (HS&E) Advisor, Radio Operator	✓				
<b>OFFSHORE - MARINE</b>	<b>Well-site - RIG MARINE</b>					
Marine Supervisor	Marine Leader / Barge Master / Chief Officer, Assistant Marine Leader / Barge Master / Chief Officer, DPO/BCO, Assist and DPO/DCO		✓			
Marine Operations Support	Crane Operator, Assistant Crane Operator, Roustabout	✓				
<b>OFFSHORE - Drilling &amp; Intervention OPERATIONS</b>	<b>Well-site - RIG Drilling &amp; Intervention</b>					
Senior Toolpusher	Senior Toolpusher				✓	✓
Toolpusher	Toolpusher				✓	
Driller	Driller, Assistant Driller			✓		
Drilling & Intervention Operations Support	Sub Sea BOP Engineer / Supervisor, Derrickman, Assistant Derrickman, Roughneck		✓			
<b>OFFSHORE - RIG MAINTENANCE</b>	<b>Well-site - RIG MAINTENANCE</b>					

## 18 Appendix E Well Control Training Matrix

Maintenance Supervisor	Maintenance Supervisor		✓			
Rig Maintenance Support	Maintenance Engineer, Engine Room Operator, Motorman, Mechanic, Welder, Electronic Technician (Drilling, DP, Subsea), Electrician	✓				
OFFSHORE - 3RD PARTY SERVICES	Well-site 3RD PARTY SERVICES					
Intervention Operations Supervisor	Wireline & Slickline Supervisor, Hydraulic Workover (Snubbing) Supervisor, MPD / UBD Supervisor, Coiled Tubing Supervisor				✓	
Intervention Operations Operator	Wireline & Slickline Operator, Hydraulic Workover (Snubbing) Operator, MPD / UBD Operator, Coiled Tubing Operator			✓		
Intervention Operations Support	Wireline & Slickline Crew, Hydraulic Workover (Snubbing) Crew, MPD / UBD Crew, Coiled tubing Crew		✓			
Operations Supervisors	Mudlogging Supervisor, Pumping & Stimulation Supervisor, Well Test Supervisor, Wellhead & XT Installation Supervisor			✓		
Operations Operator	Mudlogging / Data Engineers, Pumping & Stimulation Operator, Well Test Engineer, Wellhead & XT Engineer		✓			

Operations Support	Mudlogging Sample Catchers, Pumping & Stimulation Crew, Well Test Crew		✓			
Ancillary Service Supervisors & Operators	Directional Driller / MWD / LWD, Coring Supervisor, ROV Supervisor, Casing & Tubular Running Supervisor, Cementing Operator, Fishing Operator, Fluids Engineer		✓			
Ancillary Service Support	Coring Crew, ROV Crew, Casing & Tubular Running Crew, Cementing Crew, Solids Control Operators	✓				

Note 1: Drilling and/or Intervention: Nomenclature used to capture activities specific to Drilling, or Well (Completions, Workover & Interventions)

Note 2: OIMs should be trained at level 2, but recertified more frequently every 2 years.