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Appendix A Terms of Reference

Appendix B Glossary

Overview

The investigation into the loss of the mobile offshore drilling unit the *Ocean Ranger* and its entire crew in February 1982 offshore Newfoundland revealed serious deficiencies in the formal training of offshore workers, both in matters affecting the safety of the installation itself and in procedures to improve the chances of workers surviving an offshore accident. Since that time, both the offshore petroleum industry and government authorities have focused a large effort on remedying the deficiencies in training which were identified.

The *Atlantic Canada Offshore Petroleum Industry: Standard Practice for the Training and Qualifications of Personnel* is the culmination of a joint effort among the offshore industry operators, drilling contractors and regional and national 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. The requirements have been made sufficiently broad to allow their application to each type of installation likely to operate in Canada's east coast offshore areas. Future editions will likely be applicable to all Canadian offshore areas.

Operators of offshore projects have responsibility for 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. This Standard Practice 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.

It is intended that a joint Committee comprising industry and government representatives will review this document on an annual basis (see Appendix A for Atlantic Canada Offshore Petroleum Training and Qualifications Committee's Terms of Reference). The Committee will also consult with other relevant stakeholders such as the offshore workforce and educational and training institutions, recommend revisions to the document as deemed appropriate and seek approval of the revisions in accordance with an agreed upon amendment process. Readers should be aware that this document is the result of a collaborative effort among several government and industry groups. Consequently the document, while administered by the Petroleum Boards, was not developed in the same manner as a "Guideline" document produced solely by the Petroleum Boards pursuant to their mandates as specified in legislation.

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

Offshore Workforce Engagement Protocol

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

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

The Training and Qualifications Committee will endeavour to provide feedback to those OH&S Committees providing comments.

Chapter Summaries

1. Drilling Installations – Personnel Qualifications and Training

This chapter outlines the minimum qualifications, safety training and, where appropriate, marine and professional certification, required of operator and drilling contractor personnel assigned to *drilling installations* operating in Canada's offshore areas. For each position, the role and reporting relationship is provided along with details regarding service requirements.

2. Production Installations – Personnel Qualifications and Training

This chapter outlines the minimum qualifications, safety training and, where appropriate, marine and professional certification, required of operator and drilling contractor personnel assigned to *production installations* operating in Canada's offshore areas. For each position, the role and reporting relationship is provided along with details regarding service requirements

3. Mandatory Safety Training for All Petroleum Installations

Chapter 3 provides a brief description of the mandatory safety and emergency preparedness training required of individuals who work on or visit all installations operating in Canada's offshore areas.

The training programs described therein have been categorized as follows:

- *Personal Safety Training* which provide individuals with a basic level of training to prepare them to react effectively to protect themselves and assist others in an emergency situation;
- *Technical Safety Training* which 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; and
- *Emergency Team Training* which provide designated personnel with the knowledge and skills necessary to perform together as an effective emergency and rescue response team.

4. Standby and Supply / Support Vessel – Personnel Qualifications and Training

This chapter identifies the minimum safety and emergency response training required of the crews of support vessels as set out in energy authority legislation and Transport Canada's *Standards Respecting Standby Vessels (TP 7920)*. The training is intended to provide crew members with the knowledge and skills necessary to fulfill their support roll.

5. Emergency Preparedness and Response for All Petroleum Installations

This chapter 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.

6. Exemption and Equivalency Procedures

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). This chapter provides guidance with respect to exemption procedures along with a corresponding exemption form. The chapter also provides guidance to operators on how to document and communicate determinations of equivalency.

7. Recognition of Certificates

This chapter explains that the list of "recognized" certificates provided in the document is provided solely to assist users and is not intended to preclude the use of other training courses and approaches which meet the intent of the Standard Practice. The chapter further explains that the Committee does not accredit or approve courses or training institutions or formally audit courses, but simply makes its best effort to monitor the quality of course delivery through the resources and participation of individual members.

1 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, safety training and, where appropriate, marine and professional certification, required of operator and drilling contractor personnel assigned to drilling installations operating in Canada's offshore areas.

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

1.1 Offshore Installation Manager

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

The Offshore Installation Manager (OIM) is the person in charge of the installation at all times. He/She 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.

1.1.1 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 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 his employer.

1.1.2 MOU Certificates

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

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

Note: For non-Canadians an equivalent or acceptable level of training and certification will be considered by the energy authority in accordance with Chapter 6 of the TQSP.

1.1.3 Mandatory Safety Training

- Basic Survival Training (BST)

- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Command and Control/Management of Major Emergencies
- Person in Charge Assessment
- Stability and Ballast Control / Stability of Self-Elevating Units
- Offshore Well Control

1.2 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. He 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.

1.2.1 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 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.

1.2.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Offshore Well Control

1.3 Drilling Engineer (Operator)

Alternate Titles: Company Engineer

The Drilling Engineer works under the direction of, and provides technical support to, the Drilling Supervisor.

1.3.1 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 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.

1.3.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Offshore Well Control

1.4 Rig Superintendent

Alternate Titles: Senior Toolpusher, Rig Manager

The Rig Superintendent is the drilling contractor's or installation owner's senior on-site representative. He 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 he receives from the person in charge (OIM), if he does not also hold that designation, and from the operator's Drilling Supervisor under the terms of the drilling contract.

1.4.1 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 Rig Superintendent. This would normally take 52 weeks as a Toolpusher on an installation fitted with similar equipment.

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

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

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

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

1.4.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Offshore Well Control

1.5 Toolpusher

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

The Toolpusher works under the direction and supervision of the Rig Superintendent. He 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.

1.5.1 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 Toolpusher. This would normally take 52 weeks as a Driller on an installation fitted with similar equipment.

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 his areas of responsibility, including those relating to fire fighting, life saving and evacuation, and emergency response.

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

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

1.5.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Offshore Well Control

1.6 Driller

The Driller works under the direction and supervision of the Rig Superintendent or Toolpusher. He 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. He 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.

1.6.1 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 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 his employer.

1.6.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Offshore Well Control

1.7 Assistant Driller

The Assistant Driller works under the direct supervision of the Driller. He 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.

1.7.1 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 an Assistant Driller. This would normally take 26 weeks as a Derrickman on an installation fitted with similar equipment. An individual having served at least 26 weeks on board an installation in a supervisory position (e.g. may also fill the position. Barge Supervisor, Crane Operator) provided the individual has obtained additional training and experience in offshore drilling operations.

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 his employer. This training shall include the proper use and care of fall protection equipment.

1.7.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Offshore Well Control

1.8 Derrickman

Alternate Titles: Derrickhand

The Derrickman works under the direction and supervision of the Driller, or in his absence, the Assistant Driller. He is responsible for the operation, monitoring and maintenance of all drilling fluid systems and associated equipment. He 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.

1.8.1 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 Derrickman. This would normally take 26 weeks as a Floorman on an installation fitted with similar equipment.

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

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

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

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

1.8.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Fall Protection Training

1.9 Floorman

Alternate Titles: Roughneck, Floorhand and Rotary Helper

The Floorman works under the direction and supervision of the Driller or, in his absence, the Assistant Driller. He is responsible for the operation and routine maintenance of all drill string handling and hoisting equipment.

1.9.1 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 Floorman. This would normally take 26 weeks as a Roustabout on an installation fitted with similar equipment, or successful completion of a formal Floorman/Roughneck course at a recognized training institution.

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

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

1.9.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Fall Protection Training

1.10 Subsea Engineer

Alternate Titles: Subsea Supervisor

The Subsea Engineer works under the direction and supervision of the Rig Superintendent. He is responsible for the assembly, maintenance, testing and repair of the subsea BOP stack and related well control equipment.

1.10.1 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 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 his employer.

1.10.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

1.11 Barge Supervisor

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

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

1.11.1 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 on an installation fitted with similar equipment.

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

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

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

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

1.11.2 MOU Certificates

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

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

Note: For non-Canadians an equivalent or acceptable level of training and certification will be considered by the energy authority in accordance with Chapter 6 of the TQSP.

1.11.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Stability and Ballast Control/Stability of Self-Elevating Units

1.12 Assistant Barge Supervisor

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

The Assistant Barge Supervisor works under the direction and supervision of the Barge Supervisor. He 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.

1.12.1 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 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 his employer.

1.12.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Stability and Ballast Control / Stability of Self-Elevating Units

1.13 Ballast Control Operator

Alternate Titles: Control Room Operator, Watchstander

The Ballast Control Operator works under the direction and supervision of the deck officer on watch. He 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.

1.13.1 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 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 his employer.

1.13.2 MOU Certificates

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

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

Note: For non-Canadians an equivalent or acceptable level of training and certification will be considered by the energy authority in accordance with Chapter 6 of the TQSP.

1.13.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Stability and Ballast Control

1.14 Maintenance Supervisor

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

The Maintenance Supervisor works under the direction and supervision of the OIM. He 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.

1.14.1 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 Maintenance Supervisor. This would normally take 52 weeks as an Assistant Maintenance Supervisor on an installation fitted with similar equipment.

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 his employer.

1.14.2 MOU Certificates

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

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

Note: For non-Canadians an equivalent or acceptable level of training and certification will be considered by the energy authority in accordance with Chapter 6 of the TQSP.

1.14.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

1.15 Assistant Maintenance Supervisor

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

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

1.15.1 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 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 his employer.

1.15.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

1.16 Rig Mechanic

Alternate Titles: Mechanic, Watchkeeping Engineer

The Rig Mechanic works under the direction and supervision of the Maintenance Supervisor. He is responsible for maintaining the operational integrity of all-mechanical systems and equipment on the installation.

1.16.1 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 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 his employer.

1.16.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

1.17 Rig Electrician

Alternate Titles: Electrician

The Rig Electrician works under the direction and supervision of the Maintenance Supervisor. He is responsible for maintaining the operational integrity of all-electrical systems and equipment on the installation.

1.17.1 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 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 his employer.

1.17.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Hazardous Areas Equipment Training

1.18 Electronics Technician

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

1.18.1 Qualifications

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

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

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

1.18.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Hazardous Areas Equipment Training

1.19 Rig Welder

The Rig Welder works under the direction and supervision of the Maintenance Supervisor. He is responsible for the repair, fabrication and modification of the installation's metal structures.

1.19.1 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 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 his employer.

1.19.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

1.20 Crane Operator

Alternate Titles: Crane Driver, Roustabout Supervisor

The Crane Operator works under the direction and supervision of the senior drilling or marine person. He directs the work of the Roustabouts and is responsible for the operation and maintenance of the installation's pedestal-mounted revolving cranes.

1.20.1 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 Crane Operator. This would normally take 26 weeks as an assistant crane operator on an installation fitted with similar equipment.

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

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

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

1.20.2 Professional Certification

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

- Offshore Crane Operator Assessment

1.20.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Rigger Training
- Banksman Training

1.21 Roustabout

The Roustabout works under the direction and supervision of the Crane Operator. He 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.

1.21.1 Qualifications

This is an entry-level position.

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

1.21.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Rigger Training
- Banksman Training
- Fall Protection Training

1.22 Storekeeper

Alternate Titles: Storesman, Warehouseman, Materialsman

The Storekeeper works under the direction and supervision of the Rig Superintendent. He is responsible for ordering equipment and parts as directed, and for maintaining adequate inventory and inventory control.

1.22.1 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 Storekeeper. This would normally take 26 weeks employed on a drilling installation or in a similar industrial setting.

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

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

1.22.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Transportation of Dangerous Goods (Air and Marine (IMDG))
- Transportation of Dangerous Goods (Air) IATA

1.23 Rig Medic

The Rig Medic works under the direction and supervision of the OIM and is responsible primarily for providing routine minor health services and first aid.

1.23.1 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 Rig 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 his employer.

1.23.2 Professional Certification

An individual employed in the position of Rig 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 a advanced life support provider, or
- a VIB Canadian Military Medical Assistant Certificate.

1.23.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

1.24 Radio Operator

The Radio Operator works under the direction and supervision of the OIM, and is responsible for marine, aeronautical and ship-to-shore communications. He 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.

1.24.1 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 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 his employer.

1.24.2 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

1.24.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

1.25 Environmental Observer

Alternate Title: Ice/Weather Observer

The Environmental Observer reports to the operator's Drilling Supervisor. He 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.

1.25.1 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 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 his employer.

1.25.2 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.

1.25.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

1.26 Chief Steward

Alternate Titles: Accommodations Coordinator

The Chief Steward works under the direction and supervision of the OIM or other services personnel and is responsible for the accommodations and catering services on the installation.

1.26.1 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 Chief Steward.

The candidate must have experience with accommodations and catering management. He 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 his employer.

1.26.2 Professional Certification

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

- Safe Food Handling Practices

1.26.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

2 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, safety training and, where appropriate, marine and professional certification, required of operator and drilling contractor personnel assigned to production installations operating in Canada's offshore areas.

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

2.1 Offshore Installation Manager

Alternate Titles: Person-in-Charge, Installation Manager

The Offshore Installation Manager (OIM) is the person in charge of the installation at all times. He 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.

2.1.1 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 an OIM. This would normally take 52 weeks in a senior leadership position on a production installation.

The candidate must have an appropriate level of experience with drilling and well operations to be able to coordinate production operations with ongoing drilling, completion and work-over activity. On production installations, which include active drilling rigs, it is expected that an appropriately trained and qualified drilling management team, as specified in Chapter 1 of this document, will report to the installation manager.

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

2.1.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Command and Control/Management of Major Emergencies
- Person in Charge Assessment
- Offshore Well Control or Equivalent (need only to be completed once but not subject to recertification training)
- Ballast Control/Stability (for Column Stabilized Production Installations)

2.2 Vessel Lead

Alternate Titles: Captain

The Vessel Lead is responsible for all-marine activities and offshore services on the floating production installation and coordinates the logistics of cargo

movements, helicopters, marine activities and other services while the floating production installation is connected to the mooring system. When disconnected from the mooring system, the Vessel Lead is in command of the floating production installation and is the overall person in charge of the vessel.

2.2.1 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 Vessel Lead.

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

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

2.2.2 Professional Certification

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

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

2.2.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Marine Emergency Duties (MED) 2
- Command and Control/Management of Major Emergencies

2.3 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.

2.3.1 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 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 his employer.

2.3.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Command and Control/Management of Major Emergencies
- Offshore Well Control or Equivalent (need only to be completed once but not subject to recertification training)

2.4 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.

2.4.1 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 Production Supervisor. This would normally take 52 weeks in a senior leadership position 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 his employer.

2.4.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Command and Control/Management of Major Emergencies

2.5 Vessel Coordinator

Alternate Titles: First Officer

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

2.5.1 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 Vessel Coordinator.

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

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

2.5.2 Professional Certification

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

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

2.5.3 Mandatory Safety Training

- Basic Survival Training (BST)

- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Marine Emergency Duties (MED) 2
- Ballast Control/Stability (for Column Stabilized Production Installations)

2.6 Maintenance Supervisor

Alternate Titles: Maintenance Lead, Chief Engineer

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

2.6.1 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 Maintenance Supervisor. This would normally take 52 weeks of 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 his employer.

2.6.2 Professional Certification

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

- Appropriate University Degree or Technical Certificate

2.6.3 Mandatory Safety Training

- Basic Survival Training
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

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

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

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

2.7.1 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 HS&E Advisor.

The candidate must have demonstrated a thorough knowledge of regulatory requirements relating to the offshore work environment. He 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 his employer.

2.7.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Recognized Auditor Training
- Incident Investigation Training

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

2.8 Process Shift Lead

Alternate Titles: Production Coordinator

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

2.8.1 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 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. He should have thorough knowledge of the process and utility systems on the installation and be able to prioritize planned and unplanned work. He 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 his employer.

2.8.2 Mandatory Safety Training

- Basic Survival Training
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

2.9 Control Room Operator

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

The Control Room Operator works under the direction and supervision of the Process Shift Lead/Supervisor. He is responsible for safely and efficiently operating the installation's production equipment so that production is maximized.

2.9.1 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 Control Room Operator.

The candidate must also have a thorough knowledge of the installation's process and utilities systems. He 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 his employer.

2.9.2 Mandatory Safety Training

- Basic Survival Training
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- CCR Panel Assessment

2.10 Process Operator

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

The Process Operator works under the direction and supervision of the Process Shift Lead/Supervisor or Central Control Room Operator. He is responsible for safely and efficiently operating and maintaining the installation's production and utility systems.

2.10.1 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 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 his employer.

2.10.2 Mandatory Safety Training

- Basic Survival Training
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

2.11 Vessel Control System Operator

Alternate Titles: Second Mate

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

2.11.1 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 Vessel Control System Operator.

The candidate must have demonstrated the ability to effectively monitor the various control systems of the vessel. He 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 his employer.

2.11.2 Professional Certification

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

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

2.11.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Marine Emergency Duties (MED) 2
- Ballast Control/Stability (for Column Stabilized Production Installations)

2.12 Mechanical Technician

Alternate Titles: Rig Mechanic, Millwright, Mechanical Lead

The Mechanical Technician works under the supervision of the Maintenance Supervisor. He is responsible for maintaining the operational integrity of mechanical systems and equipment related to producing operations on the installation.

2.12.1 Qualifications

The candidate must have adequately demonstrated to his 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 his employer.

2.12.2 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

2.12.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

2.13 Electrical Technician

Alternate Titles: Rig Electrician, Electrical Lead

The Electrical Technician works under the supervision of the Maintenance Supervisor. He is responsible for maintaining the operational integrity of electrical systems and equipment related to producing operations on the installation.

2.13.1 Qualifications

The candidate must have adequately demonstrated to his 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 his employer.

2.13.2 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

2.13.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Hazardous Areas Equipment Training

2.14 Instrument Technician

Alternate Titles: Instrument Lead

The Instrument Technician works under the supervision of the Maintenance Supervisor. He is responsible for maintaining the operational integrity of instrumentation systems and equipment related to producing operations on the installation.

2.14.1 Qualifications

The candidate must have adequately demonstrated to his 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 his employer.

2.14.2 Professional Certification

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

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

2.14.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Hazardous Areas Equipment Training

2.15 Telecoms Technician

The Telecoms Technician works under the supervision of the Maintenance Supervisor. He is responsible for maintaining the operational integrity of telephone and communication systems on the installation.

2.15.1 Qualifications

The candidate must have adequately demonstrated to his 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 his employer.

2.15.2 Professional Certification

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

- Electronics Trade Certificate or equivalent

2.15.3 Mandatory Safety Training

- Basic Survival Training
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Hazardous Areas Equipment Training

2.16 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. Crane Operators and Deck Crew Members report directly to the Deck Supervisor.

2.16.1 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. He 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. He 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 his employer.

2.16.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- 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.

2.17 Crane Operator

The Crane Operator works under the direction and supervision of the Deck Supervisor or other services personnel. He is responsible for the operation and maintenance of the installation's pedestal-mounted revolving cranes.

2.17.1 Qualifications

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

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

The candidate must have a thorough knowledge of the operating and maintenance procedures necessary for the safe operation of the installation's cranes and have

successfully completed theoretical and practical training at a recognized training institution or from a qualified instructor, in accordance with API RP 2D – Recommended Practice for the Operation and Maintenance of Offshore Cranes. www.api.org.

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

2.17.2 Professional Certification

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

- Offshore Crane Operator Assessment

2.17.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Rigger Training
- Banksman Training

2.18 Deck Operator

Alternate Titles: Roustabout, Multi Skilled Deck Crew

The Deck Operator works under the direction and supervision of the Deck Supervisor or Crane Operator.

2.18.1 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 his employer.

2.18.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Rigger Training

- Banksman Training
- Fall Protection Training

2.19 Storeman

Alternate Titles: Material Controller, Storekeeper, Warehouseman, Materialsman

The Storeman works under the direction of the Deck Coordinator. He is responsible for ordering materials and parts as directed and for maintaining adequate inventory and inventory control.

2.19.1 Qualifications

The candidate must have adequately demonstrated to his 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 his employer.

2.19.2 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Transportation of Dangerous Goods (Air and Marine) (IMDG)
- Transportation of Dangerous Goods (Air) IATA

2.20 Scaffolder

The Scaffolder works under the direction and supervision of either the Deck or Maintenance Supervisor. He is responsible for the assembly and disassembly of all scaffolds required for work on the installation. He is also responsible for the certification of scaffolds on a regular basis.

2.20.1 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 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 3.2.17).

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

2.20.2 Professional Certification

An individual employed in the position of Scaffolder shall hold:

- Scaffolding Certificate (refer to 3.2.17)

2.20.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Fall Protection Training

2.21 Welder

The Welder works under the direction and supervision of the Maintenance Supervisor. He is responsible for the repair, fabrication and modification of the installation structures.

2.21.1 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 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 his employer.

2.21.2 Professional Certification

An individual employed in the position of Welder shall hold:

- Inter-Provincial Journeyman's Certificate (Welding)

2.21.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)

- Workplace Hazardous Materials Information System (WHMIS)

2.22 Platform Nurse

Alternate Titles: Rig Medic, Offshore Health Advisor

The Platform Nurse works under the direction and supervision of the OIM and is primarily responsible for providing health services and first aid to employees of the installation.

2.22.1 Qualifications

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

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

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

2.22.2 Professional Certification

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

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

2.22.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Advanced Cardiac Life Support Certificate
- Basic Trauma Life Support or Pre-hospital Trauma Life Support Certificate

2.23 Radio Operator

The Radio Operator works under the direction and supervision of the OIM, and is responsible for marine, aeronautical and ship-to-shore communications. He

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.

2.23.1 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 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 his employer.

2.23.2 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

2.23.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

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.

2.24 Environmental Observer

Alternate Titles: Ice/Weather Observer

The Ice/Weather Observer reports to the OIM. He 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.

2.24.1 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 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 his employer.

2.24.2 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.

2.24.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

2.25 Chief Steward

Alternate Titles: Accommodations Coordinator

The Chief Steward works under the direction and supervision of the OIM or other services personnel and is responsible for the accommodations and catering services on the installation.

2.25.1 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 Chief Steward.

The candidate must have experience with accommodations and catering management. He 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 his employer.

2.25.2 Professional Certification

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

- Safe Food Handling Practices

2.25.3 Mandatory Safety Training

- Basic Survival Training (BST)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

2.26 Completions and Intervention Supervisor

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

2.26.1 Qualifications

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

The candidate must demonstrate an ability to work independently under general supervision, exercise leadership and provide a safe work example for subordinate

personnel. He/she should have thorough knowledge of the completion and intervention systems on the installation and be able to prioritize planned and unplanned work. He/she 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 his / her employer.

2.26.2 Mandatory Safety Training

- Basic Survival Training
- Offshore Well Control – Completions and Interventions
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)

3 Mandatory Safety Training for All Petroleum Installations

The isolated nature of offshore installations create safety and emergency preparedness training needs to a much greater degree than would apply to a similar industrial setting onshore.

This section provides a brief description of the mandatory safety and emergency preparedness training required of individuals who work on or visit installations operating in Canada's offshore areas.

The training programs described herein have been categorized as follows:

- *Personal Safety Training* which provide individuals with a basic level of training to prepare them to react effectively to protect themselves and assist others in an emergency situation;
- *Technical Safety Training* which 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; and
- *Emergency Team Training* which provide designated personnel with the knowledge and skills necessary to perform together as an effective emergency and rescue response team.

3.1 Personal Safety Training

- Offshore Survival Introduction (OSI)
- Basic Survival Training (BST)
- Basic Survival Training – Recurrent (BST-R)
- Helicopter Underwater Emergency Breathing Apparatus (HUEBA)
- Hydrogen Sulphide (H₂S)
- Workplace Hazardous Materials Information System (WHMIS)
- Transportation of Dangerous Goods (TDG)
- Basic First Aid
- Advanced First Aid
- Cardiopulmonary Resuscitation (CPR) – Level C
- Regulatory Awareness

3.1.1 Offshore Survival Introduction (OSI)

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 and others 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 6.2.2 and 6.2.3 and must each be closely supervised for the duration of their stay offshore.

Applies To

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

Course Duration

One (1) day

Prerequisites

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

Renewal

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

Course Content

- Offshore hazards, emergency response and installation abandonment
- Evacuation systems, lifesaving appliances and personal flotation devices
- Practice pool exercises
- Survival theory, survival pattern and distress signals
- Rescue and rescue equipment
- Helicopter safety and emergency procedures
- Helicopter Underwater Escape Trainer (HUET) exercises
- Compressed Air Helicopter Underwater Emergency Breathing Apparatus (HUEBA) training (refer to section 3.1.4)

Recognized Certificates

- Offshore Survival Introduction Certificate issued by the Marine Institute, St. John's, Newfoundland and Labrador
- Offshore Survival Introduction Certificate issued by Survival Systems Ltd., Dartmouth, Nova Scotia

Note: While most international basic survival courses are not acceptable for regular rotation personnel they may be acceptable for visitors, i.e. personnel who spend less than seven days offshore during any twelve month period. Generally, if an operator can verify and document that a visitor has a current basic survival training certificate that includes a HUET module that is recognized as valid and current by a major national industry association, then the visitor need not complete the OSI course. We caution that HUET is not required training in some countries, e.g. Denmark, so individuals who have certificates from such countries, must also have specific proof of having completed a HUET course. Additionally, a compressed air Helicopter Underwater Emergency Breathing Apparatus (HUEBA) is used in Atlantic Canada; to fly offshore individuals will need to be trained in its use. If an OSI is not required for a visitor a stand-alone compressed air HUEBA course will be required (refer to sec 3.1.4).

3.1.2 Basic Survival Training (BST)

Course Objectives

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

Applies To

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

Note: This course must be completed prior to an employee's first tour of duty offshore. However, because of the intermittent nature of employment and course scheduling, operators may occasionally have to avail of the exemption procedure outlined in Chapter 6 of this document. Persons so exempt must receive the "Helicopter/Vessel Safety Briefing" and the "Installation Safety Induction" referred to in section 5.2.2 and 5.2.3, and must each be closely supervised for the duration of their tour of duty offshore.

Course Duration

Five (5) days

Prerequisites

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

Renewal

Three (3) years

Course Content

- Hazards and emergencies associated with working offshore
- Emergency preparedness and response
- Prevention, detection and control of fire
- Self-contained breathing apparatus (SCBA)
- Personal flotation devices
- Installation Abandonment
- Inflatable life rafts
- Totally enclosed motor-propelled survival craft (TEMPSC)
- Enemies of survival
- Search and Rescue
- Practical sea exercises
- Helicopter safety and emergency procedures
- Helicopter Underwater Escape Trainer (HUET) exercises
- Personnel Transfer Exercises
- Demonstration of emergency personal descent devices
- Demonstration and use of smoke hoods
- Compressed Air Helicopter Underwater Emergency Breathing Apparatus (HUEBA) training (refer to section 3.1.4)

Recognized Certificates

- Basic Survival Training (BST) Certificate issued by the Marine Institute, St. John's, Newfoundland and Labrador

- Basic Survival Training (BST) Certificate issued by Survival Systems Ltd., Dartmouth, Nova Scotia

Note: Personnel entering the jurisdiction with a current OPITO approved “Basic Offshore Safety Induction & Emergency Training” (BOSIET) certificate or an OLF approved “Basic Safety and Emergency Training” certificate will be required to complete 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 OLF- approved courses will be considered valid for a period of three (3) years from its date of issue.

3.1.3 Basic Survival Training – Recurrent (BST-R)

Course Objectives

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

Applies To

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

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

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

Course Duration

Two (2) days.

Prerequisites

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

Renewal

Three (3) years.

Course Content

- Discussion of offshore hazards
- Personal lifesaving equipment
- Installation abandonment, survival and rescue equipment and techniques
- Practical sea exercises
- Safety and emergency procedures associated with helicopter transport
- Helicopter Underwater Escape Trainer (HUET) exercises
- Compressed Air Helicopter Underwater Emergency Breathing Apparatus (HUEBA) training (refer to section 3.1.4)

Recognized Certificates

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

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

3.1.4 Helicopter Underwater Escape Breathing Apparatus (HUEBA)

Course Objectives

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

Applies To

An individual who holds a valid OSI, BST, BST-R or equivalent and has not completed the HUEBA training

Course Duration

1 hour lecture and progressive practical pool surface exercises

Note: HUEBA surface training: the jugular notch must not be deeper than eight inches underwater in the 180 degree position.

Prerequisites

A valid BST, BST-R or OSI or equivalent requiring an upgrade to include HUEBA

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

Renewal

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

Course Content

The HUEBA training course will be designed to provide training that results in the following competencies:

- Describe the physics of HUEBA operation
- Describe the characteristics of HUEBA equipment
- Understand HUEBA clearing operations
- Demonstrate the practical use of a HUEBA (Progression from dry familiarization through to surface water inverted/submerged use of device while wearing survival suit using chair technology that allows four-point harness)

Recognized Certificates

- Compressed Air HUEBA certificate issued by the Marine Institute, St. John's, Newfoundland and Labrador
- Compressed Air HUEBA certificate issued by Survival Systems Ltd., Dartmouth, Nova Scotia

3.1.5 Hydrogen Sulphide (H₂S)

Course Objectives

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

Applies To

All personnel traveling to an installation, except visitors.

Note: Where the operator of a production installation can demonstrate that hydrogen sulphide is not present in the reservoir, one time in-house

familiarization training may be substituted until such time production activities indicate the presence of hydrogen sulphide.

Course Duration

One (1) day

Prerequisites

None

Renewal

Three (3) years

Course Content

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

Recognized Certificates

- H₂S Alive Certificate issued by Enform, or a certified instructor in possession of a valid Enform Instructor's Training Agreement

Note: For re-validation of H₂S Alive Certificates, individuals have the option of either completing the one (1) day H₂S Alive course and obtaining a new H₂S Alive Certificate valid for three (3) years, or challenging the examination, completing the practical exercises before an Enform certified instructor and obtaining a H₂S Alive© Certificate valid for three (3) years. Following the expiration of the H₂S Alive©, the one (1) day H₂S Alive course must be completed.

3.1.6 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 personnel traveling to an installation, except visitors.

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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

3.1.7 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

- TDG – Air: Three (3) days
- TDG – Marine: Two (2) days

Prerequisites

None

Renewal

- TDG – Air: Two (2) years
- TDG – Marine: Three (3) years

Course Content

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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

3.1.8 Basic First Aid

Course Objectives

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

Applies To

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

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

Course Duration

Minimum of one (1) day

Prerequisites

None

Renewal

Three (3) years

Course Content

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

Recognized Certificates

- Emergency First Aid or Standard First Aid Certificate issued by St. John Ambulance, or a certified instructor in possession of a valid St. John Ambulance Instructor's Certificate
- Emergency First Aid or Standard First Aid Certificate issued by the Canadian Red Cross Society, or a certified instructor in possession of a valid Canadian Red Cross Instructor's Program Certificate

3.1.9 Advanced First Aid

Course Objectives

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

Applies To

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

Note: The above numbers are applicable for any marine installation or structure employing more than forty (40) persons. For marine installations or structures employing less than forty (40) persons, the number of employees required to hold

a valid certificate in advanced first aid shall be in accordance with the current edition of the Petroleum Occupational Safety and Health Regulations.

Course Duration

Five (5) days

Prerequisites

Cardiopulmonary Resuscitation (CPR) – Level C

Renewal

Three (3) years

Course Content

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

Recognized Certificates

- Advanced Level 1 Certificate issued by St. John Ambulance, or a certified instructor in possession of a valid St. John Ambulance Instructor's Certificate
- First Responder Certificate issued by the Canadian Red Cross Society, or a certified instructor in possession of a valid Canadian Red Cross First Responder Instructor Certificate

3.1.10 Cardiopulmonary Resuscitation (CPR) – Level C

Course Objectives

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

Applies To

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

Course Duration

Minimum of one (1) day

Prerequisites

None

Renewal

One (1) year

Course Content

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

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

Recognized Certificates

- CPR-Level C Certificate issued by the Canadian Heart and Stroke Foundation, or a certified instructor in possession of a valid Canadian Heart and Stroke Foundation Basic Cardiac Life Support Instructor Certificate
- CPR-Level C Certificate issued by St. John Ambulance, or a certified instructor in possession of a valid St. John Ambulance Instructor's Certificate
- CPR-Level C Certificate issued by the Canadian Red Cross Society, or a certified instructor in possession of a valid Canadian Red Cross Vital Link Instructor's Program Certificate or a First Responder Instructor Certificate

3.1.11 Regulatory Awareness

Course Objectives

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

Applies To

To all permanently and regularly assigned personnel.

Course Duration

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

Prerequisites

None

Renewal

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

Course Content

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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out in this section of the document.

3.2 Technical Safety Training

- Offshore Well Control
- Stability and Ballast Control
- Stability and Ballast Control - Recurrent
- Stability of Self-Elevating Units
- Stability of Self-Elevating Units – Recurrent
- Command and Control/Management of Major Emergencies
- Recognized Auditor Training
- Incident Investigation Training
- CCR Panel Assessment
- Hazardous Area Equipment Training
- Rigger Training
- Banksman Training
- Fall Protection Training
- Offshore Crane Operator Assessment
- Oil Well Explosives Handling
- Scaffolding Training
- Advanced Scaffold Erection
- Offshore MedEvac Team Training (OMT)

3.2.1 Offshore Well Control

Course Objectives

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

Applies To

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

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

Course Duration

Five (5) days

Prerequisites

None.

Note: Basic arithmetic, reading and writing skills, as well as knowledge of drilling and well control operations and equipment are recommended.

Renewal

Two (2) years

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

Course Content

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

Recognized Certificates

- A WELLCAP Offshore Well Control Certificate issued by an institution approved by the IADC to provide WELLCAP Training
- An Offshore Well Control Certificate issued by the IWCF
- For surface BOP stacks a Second Line Supervisors Well Control Certificate issued by Enform

Note: It is recommended by CAPP, CAODC and the energy authorities that well control training be conducted in Canada, preferably through the Enform approved well control training program, particularly in the case of re-certification – unless there are compelling and extenuating reasons to attend a training facility outside of Canada.

3.2.2 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

Successful completion of a previous basic well control (drilling) course (certification does not have to be current). For service company supervisors – no pre-requisites are required.

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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any valid IADC WELLCAP or IWCF certificate, and any properly documented in-house or third-party training course that meets the objectives and requirements previously set out (see Notes below).

Notes:

- 1) Certification from existing training courses which meets the intent of the course content as listed above will be accepted by the Regulators;
- 2) A phase-in period of two (2) years will be permitted to allow training providers necessary time to update their curricula to meet the course content and objectives as outlined above;
- 3) 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.
- 4) For Operator's representatives, and for Installation Owners representatives, combined certification in completion and well intervention (coiled tubing, wireline and snubbing) would be appropriate.

3.2.3 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 column-stabilized 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 column-stabilized installation.

Course Duration

Minimum of nine (9) days

Prerequisites

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

Renewal

Three (3) years

Course Content

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

Note: Course curriculum must include the use of a computer-based ballast control simulator capable of simulating the functions of a typical twin pontoon column-stabilized 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).

Recognized Certificates

- Stability II and Stability III Certificates issued by the Marine Institute, St. John's, Newfoundland and Labrador

Note: Stability I, or basic stability knowledge as assessed by the instructor, is a prerequisite for Stability II.

- Course 2 – Stability and Damage Control and Course 3 – Ballast Control Simulator Certificates issued by Aberdeen College, Aberdeen, Scotland

Note: Course 1 – Stability Theory, or other acceptable stability training, is a prerequisite for Course 2.

3.2.4 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 column-stabilized installation.

Applies To

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

Course Duration

Minimum of four (4) days

Prerequisites

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

Renewal

Three (3) years

Course Content

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

Recognized Certificates

- Stability III Certificate issued by the Marine Institute, St. John's, Newfoundland and Labrador
- Course 3 – Ballast Control Simulator Certificate issued by Aberdeen College, Aberdeen, Scotland

3.2.5 Stability of Self-Elevating Units

Course Objectives

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

Applies To

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

Course Duration

Minimum of four (4) days

Prerequisites

None

Renewal

Three (3) years

Course Content

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

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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

3.2.6 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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

3.2.7 Command & Control and Management of Major Emergencies

Course Objectives

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

changes in plans and priorities. They should be able to effectively delegate authority, manage individuals and teams and deal with stress in themselves and others.

Applies To

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

Course Duration

A minimum of four (4) days

Prerequisites

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

Renewal

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

Course Content

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

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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the

objectives and requirements previously set out in this section of the document. For certified marine officers, the completion of Marine Emergency Duties (MED) parts C and D in accordance with TP 4957 or the equivalent training in accordance with the IMO's STCW convention is acceptable.

3.2.8 Person in Charge Assessment

Assessment Objectives

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

Applies To

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

Assessment Duration

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

Prerequisites

Command & Control and Management of Major Emergencies

Renewal

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

Assessment Content

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

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

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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any unbiased, properly documented in-house or third party assessment that meets the objectives and requirements previously set out in this section of the document. It should be noted that 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 3.2.7 of this document.

3.2.9 Incident Investigation Training

Objectives

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

Applies To

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

Course Duration

Minimum of sixteen (16) hours

Prerequisites

None

Renewal

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

Course Content

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

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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

3.2.10 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.

3.2.11 Hazardous Area Equipment Training**Objectives**

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

Applies To

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

Course Duration

Five (5) days

Prerequisites

None

Renewal

Non-applicable

Course Content

Theoretical training in:

- Principles of flammable materials
- Division area and IEC zone classification
- Equipment marking and selection
- Methods of explosion protection
- Intrinsic safety
- Equipment inspection and maintenance

Practical training in:

- Glanding
- Installation of power circuits
- Inspection of power circuits
- Installation of intrinsically safe circuits
- Inspection of intrinsically safe circuits

Recognized Certificates

- Hazardous Area “EX” Training Certificate as issued by the College of the North Atlantic in St. John’s, Newfoundland and Labrador
- Hazardous Area “EX” Training Certificate as issued by the Nova Scotia Community College at the Leeds Street Campus in Halifax, Nova Scotia

3.2.12 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

Deck Supervisors, Crane Operators, Deck Operators, Roustabouts, Mechanics, Millwrights, and any other personnel who are conducting rigging and lifting operations or who supervise lifting operations.

Course Duration

Minimum of two (2) days

Prerequisites

None

Renewal

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

Course Content

As per section 3.1.4 and Appendix A3 or API RP 2D, fifth edition, June 2003.

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

3.2.13 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 imitations 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 required to conduct 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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

3.2.14 Fall Protection Training

Objectives

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

Applies To

All personnel who are required to use fall protection.

Course Duration

Minimum of four (4) hours

Prerequisites

None

Renewal

Every five years

Course Content

- Legislative requirements
- Fall protection theory
- Types of equipment and limitations of each type
- Identification of equipment using samples
- Practical applications of fall arrest and fall prevention systems
- Pre-use inspection of equipment using samples
- The correct fitting of harnesses using examples
- Ladder ascent and descent using permanent and temporary systems

- Proper care and use of fall arrest lanyards with deceleration shock absorbers
- The use of vertical and horizontal lifelines
- Care, maintenance, inspection and certification
- Introduction to rescue considerations

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

3.2.15 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, fifth edition, June 2003. 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.

3.2.16 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

Recognized Certificates

An Oil-well Perforators Safety Training Certificate issued by the Petroleum Industry Training Service, Calgary, AB and an Inter-provincial Oil-well Blasters Permit issued by the Petroleum Industry Training Service, Calgary, AB.

3.2.17 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 denoted below as 3.2.17.1 Competent scaffold Erection and 3.2.17.2 Advanced Scaffold Erection.

3.2.17.1 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 erection 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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course and competency assessments that meet the objectives and requirements previously set out.

3.2.17.2 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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course and competency assessments that meet the objectives and requirements previously set out.

3.2.18 Offshore MedEvac Team Training (OMT)

Objectives

To provide participants with an awareness of the hazards associated with both caring for and transporting injured workers via helicopter an understanding of their responsibilities during an offshore emergency and the ability to care for themselves and assist others in a survival situation.

Applies To

This program is specifically designed to increase the knowledge and skills for Medical Evacuation (MedEvac) personnel and to enable them to interact appropriately with Emergency Response Teams (ERT) offshore.

Note: This training is not to allow for stays on an offshore installation; for planned stays a valid OSI or BST/BST-R is required.

Note: MedEvac workers holding a valid BST/BST-R are exempt from this training

Course Duration

Two (2) days

Prerequisites

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

Renewal

Three (3) years

Course Content

- Offshore emergencies and medical considerations
- Personnel transfer systems and patient care
- Helicopter hoisting
- Abandonment, survival and rescue equipment techniques
- Safety and emergency procedures associated with helicopter transport
- Non-ambulatory patients and helicopter evacuation
- Helicopter underwater escape trainer (HUET) exercises
- Compressed Air Helicopter Underwater Emergency Breathing Apparatus (HUEBA)
- Practical in water exercises with simulated conditions

3.3 Emergency Team Training

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

3.3.1 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 fire fighting as part of their emergency duties assignment.

Course Duration

Five (5) days

Prerequisites

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

Renewal

Three (3) years

Course Content

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

Recognized Certificates

- Offshore Fire Team Certificate issued by the Marine Institute, St. Johns, Newfoundland and Labrador
- Offshore Fire Team Certificate issued by Survival Systems Ltd., Dartmouth, Nova Scotia
- Marine Emergencies Duties (MED) B2 Marine Fire-Fighting Certificate issued by a training institution certified by Transport Canada

3.3.2 Offshore Fire Team–Recurrent (OFT-R)

Course Objectives

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

Applies To

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

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

Course Duration

Two (2) days

Prerequisites

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

Renewal

Three (3) years

Course Content

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

Recognized Certificates

- Offshore Fire Team (Recurrent) Certificate issued by the Marine Institute, St. John's, Newfoundland and Labrador
- Offshore Fire Team (Recurrent) Certificate issued by Survival Systems Ltd., Dartmouth, Nova Scotia

3.3.3 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 Current Medical Certificate as per CAPP's East Cost Medical Assessment for Fitness to Work Offshore Guide or as required by the Training Institution
- A valid Basic Survival Training (BST) Certificate, or equivalent
- A valid Offshore Fire Team (OFT) Certificate, or equivalent
- At least six (6) months prior experience in helideck operations on an offshore installation.

Renewal

Three (3) years

Note: Re-certification may be obtained by either:

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

Course Content

- HLO responsibilities
- Helicopter types and design
- Helicopter operations, including the effects of weather
- Helideck suitability and equipment
- Communications network
- Pre-landing considerations and preparation
- Landing and departure routines
- Helicopter start-up and shut-down
- Special hazards and precautions
- Carriage and marking of cargo, including dangerous goods

- Fueling control and procedures

Recognized Certificates

- Helicopter Landing Officer Certificate issued by the Marine Institute, St. Johns, Newfoundland and Labrador
- Helicopter Landing Officer Certificate issued by Survival Systems Ltd., Dartmouth, Nova Scotia

3.3.4 Rescue Boats

Course Objectives

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

Applies To

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

Course Duration

Fourteen hours

Prerequisites

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

Renewal

Three (3) years

Note: Re-certification may be obtained by either:

- *completing the course and receiving a new certificate valid for three (3) years, or*
- *prior to the expiration of the certificate, the OIM issuing a written document, valid for three (3) years, attesting to the individual's continued proficiency in the operation of the installation's rescue craft 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

Recognized Certificates

- Rescue Craft Team Certificate issued by the Marine Institute, St. Johns, Newfoundland and Labrador
- Rescue Craft Team Certificate issued by Survival Systems Ltd., Dartmouth, Nova Scotia

Note: For offshore petroleum installations outfitted with Fast Rescue Boats for rescue purposes, applicable training requirement is as detailed under section 4.2.6 Fast Rescue Boats.

3.3.5 Survival Craft Coxswain

Course Objectives

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

Applies To

All designated survival craft coxswains on an offshore installation.

Course Duration

Minimum of four (4) days

Prerequisites

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

Renewal

Three (3) years

Course Content

- Inflatable liferafts and lifeboats
- Small team leadership and crowd control
- Survival craft launching systems
- Abandonment procedures
- Handling of survival craft
- Actions after abandonment
- Signaling devices
- Rescue procedures
- Practical exercises and drills

Recognized Certificates

- Offshore Petroleum Installation Lifeboat Coxswain Certificate issued by the Marine Institute, St. John's, Newfoundland and Labrador
- Offshore Survival Craft or Offshore Survival Craft Leader or Coxswain Course with PROD and Skyscape Certificate issued by Survival Systems Ltd., Dartmouth, Nova Scotia
- Marine Emergencies Duties (MED) B1 (Survival Craft) Certificate issued by a Training Institution certified by Transport Canada to issue this certificate

Note: The MED-B1 Certificate is only considered valid for three years and renewal should be by way of a petroleum industry specific lifeboat coxswain course.

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

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

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

This section outlines the minimum qualifications, safety training and, where appropriate, marine certification for Standby and Supply / Support Vessels while operating *(1) within 500 meters of a production of 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.

4.1 Deckhand

Alternate Titles: Seaman, General Purpose Crew

The deckhand works under the supervision of the Chief Officer. While working within the 500-meter zone of an offshore asset, duties may include, 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, secure of wires, spool on and off pennants, stow 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 not limited to, coxswain of the Fast Rescue Craft (FRC), crewman/spotter of FRC, Operate FRC Davit for launch/recovery, prepare FRC for launch/recovery, operate crane for deployment of Empra Basket, operate crane for deployment of Davcon Scoop (if fitted) and First Aid attendant.

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

4.1.1 Qualifications

This is an entry-level position.

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

A deckhand's duties may include, over time, the demonstration of competency in the following work roles. Deckhands will be supervised in these roles until competency is demonstrated.

- Cargo operations;
 - Handling of containerized cargo, tubular strapped lifts and lifts of different shapes and sizes while being transferred to/from offshore assets through the use of crane operations
 - Securing and/or preparing for discharge, deck cargo of different sizes and shapes

- Handling of bulk and liquid hoses suspended from offshore asset crane, and, hookup, disconnection and securing of hoses
- Proper interphase communication/signaling between supply/support vessel and offshore asset
- Anchor handling/towing operations
 - Handling of wires suspended from offshore asset crane
 - Hook up and securing of wires on deck
 - Operational use of tugger winches and capstains
 - Proper communication/signaling while participating in work activity
- Iceberg management operations;
 - Hookup and securing of iceberg towrope or net
 - Disconnection of tow
 - Proper communication/signaling while participating in work activity

4.1.2 Mandatory Safety Training

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

4.1.3 Mandatory Certification

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

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

4.2.1 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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

4.2.2 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

Recognized Certificates

The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

4.2.3 Basic First Aid

Course Objectives

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

Applies To

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

Course Duration

One (1) day minimum

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 eye injuries
- CPR
- Hypothermia, diagnosis and treatment

Recognized Certificates

- Emergency First Aid or Standard First Aid Certificate issued by St. John Ambulance, or a certified instructor in possession of a valid St. John Ambulance Instructor's Certificate
- Emergency First Aid or Standard First Aid issued by the Canadian Red Cross Society, or a certified instructor in possession of a valid Canadian Red Cross Instructor's Program Certificate

4.2.4 Advanced First Aid

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

Course Objectives

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

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

Cardiopulmonary Resuscitation (CPR) – Level C

Renewal

Three (3) years

Course Content

- Roles and responsibilities
- Attitude and professionalism

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

Recognized Certificates

- Advanced Level 1 Certificate issued by St. John Ambulance, or a certified instructor in possession of a valid St. John Ambulance Instructor's Certificate.
- First Responder Certificate issued by the Canadian Red Cross Society, or a certified instructor in possession of a valid Canadian Red Cross First Responder Instructor Certificate.

4.2.5 Cardiopulmonary Resuscitation (CPR) – Level C

Course Objectives

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

Applies To

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

Course Duration

Minimum of one (1) day

Prerequisites

None

Renewal

One (1) year

Course Content

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

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

Recognized Certificates

- CPR Level C Certificate issued by the Canadian Heart and Stroke Foundation, or a certified instructor in possession of a valid Canadian Heart and Stroke Foundation Basic Cardiac Life Support Instructor Certificate.
- CPR Level C Certificate issued by St. John Ambulance, or a certified instructor in possession of a valid St. John Ambulance Instructor's Certificate.
- CPR Level C Certificate issued by the Canadian Red Cross Society, or a certified instructor in possession of a valid Canadian Red Cross Vital Link Instructor's Program Certificate or a First Responder Instructor Certificate.

4.2.6 Fast Rescue Boat (FRB)

Course Objectives

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

Applies To

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

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

Course Duration

Four (4) days

Prerequisites

None

Renewal

Five (5) years

Note: Re-certification may be obtained by either:

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

Course Content

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

Recognized Certificates

- Fast Rescue Boat Certificate issued by The Marine Institute, St. John's Newfoundland and Labrador.
- Fast Rescue Craft Certificate issued by Survival Systems Ltd., Dartmouth, Nova Scotia.
- The energy authorities will, as per the Committee's terms of reference, accept any properly documented in-house or third party training course that meets the objectives and requirements previously set out.

5 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's in charge, survey outside agencies as sources of help, or exercise and train people to respond appropriately. These must be accomplished prior to the emergency.

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

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

5.1 Emergency Action Plans

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

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

The action plan should include an organization chart depicting key operator and principal contractor personnel who have an assigned responsibility for the management of emergencies. As part of their emergency planning arrangements, operators should identify the criteria that have been established for declaring an alert and implementing precautionary measure, including possible down manning of personnel.

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.

5.2 Awareness Training

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

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

Awareness training should be given in three (3) stages:

5.2.1 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 RCC or MRSC in an emergency must obtain a briefing from RCC or MRSC staff to the satisfaction of the RCC and/or MRSC. 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*”.

5.2.2 Helicopter/Vessel Safety Briefing

The Helicopter/Vessel Safety Briefing 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 should receive a Helicopter/Vessel Safety Briefing prior to being given transport to or from an offshore installation. The briefing must be repeated for each trip and 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 enroute;
- 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.

5.2.3 Installation Safety Induction

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

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

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

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

- general organizational and command structure for the installation;
- hazards and potential emergencies;

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

5.2.4 Employee Orientation

An Employee Orientation is an effective tool that ensures newly assigned employees 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.

Every newly assigned employee should receive a formal Employee Orientation from a supervisor during the employee's first tour of duty offshore. The orientation should include, at a minimum, the following information:

- the employer's policies relating to health, safety and environmental protection;
- the procedures, general work rules and inherent hazards associated with the employee's job assignment;
- the procedures to be followed by the employee in the event of an accident or emergency involving the employee or in the employee's work area(s);
- the location, use and care of the personal protective equipment the employee is required to wear while carrying out his normal employment and emergency response duties; and
- the location and use of any emergency equipment available in or near the employee's work area(s) that the employee may be required to use in response to an accidental or emergency event.

5.3 Emergency Drills and Exercises

Many alert and emergency events can, depending upon their severity, lead ultimately to the disablement or abandonment of the installation or vessel. It is, therefore, essential that the offshore work force, as well as onshore support personnel and agencies, be well-practiced in reacting to each of the events, and that these events form the basis for developing hypothetical emergency drill and

exercise scenarios. Emergency drills and exercises based on realistic scenarios offer an effective means of validating the readiness of emergency action plans, equipment and personnel. They test the way notifications of emergencies and instructions are communicated, the simulated use of equipment and emergency teams, and the effectiveness of the chain of command.

5.3.1 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 so as to ensure all personnel are aware of their emergency stations and are capable of efficiently performing the emergency duties assigned to them.

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

Muster/Evacuation 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.

Frequency

Weekly

Participation

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

Fire Drills

Purpose

To ensure designated personnel on the installation are:

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

Frequency

Weekly

Participation

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

Well Control Drills

Purpose

To ensure designated personnel on the installation are:

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

Frequency

Weekly

Participation

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

Ballast Control Drills

Purpose

To ensure designated personnel on the installation are:

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

Frequency

Weekly

Participation

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

Man Overboard/Fast Rescue Craft 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 craft, 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

Participation

Senior marine personnel, members of the installation's/vessel's rescue craft 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.

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 Rig Medic in casualty management and handling, and in the preparation of casualties for evacuation.

Frequency

Monthly

Participation

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

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
- and able to reset the pawls and confirm their correct positions.

Frequency

Monthly

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.

5.3.2 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 take up an appropriate position?

For each drill, a record should be prepared 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. A sample *Emergency Drill Summary* record is provided as Figure 5-1.

EMERGENCY DRILL SUMMARY

Rig Name	Well Name	Date	
Drill Leader	Position	Start Time	Finish

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

Drill Scenario:

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

Comments/Recommendations:

Completed by:	Position:	Date:
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Figure 5-1 Sample *Emergency Drill Summary Record*

5.3.3 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 preparedness, including the communications and relationships between the installation, its standby vessel(s), and onshore emergency support teams.

To this end, operators should conduct an emergency response “table top” exercise prior to commencement of operations. The exercise 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.

Operators must also participate in at least one oil spill counter-measures exercise in each year that the operator is engaged in an offshore program. Where more than one operator is active in an area, they are encouraged to take a cooperative approach and demonstrate their combined capability to respond effectively to a hydrocarbon spill 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.
- A record of the exercise should be entered in the installation’s/vessel’s official logbook.

5.4 Emergency Action Teams

It is essential that offshore facilities are staffed with designated emergency action 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 action teams:

5.4.1 Fire Teams

Role

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

Composition

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

5.4.2 Helideck Teams

Role

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

Composition

Offshore installation as are required to have on board, at all times, at least six (two teams of three) designated personnel. Each team must be under the direction of a certified Helicopter Landing Officer (HLO) who, along with at least two other team members, has completed training in Offshore Fire Team. Each team

member must also receive instruction from a person knowledgeable of the equipment and procedures specific to the type of aircraft to be used on the installation

5.4.3 Rescue Craft Teams

Role

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

Composition

Offshore installations equipped with a rescue craft 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 Craft 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.

5.4.4 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.

5.4.5 First Aid Teams

Role

To provide support to the Rig 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 Rig Medic but, at no time, may be less than five (5) members, including the Rig Medic as the designated team leader. At least one team member, other than the Rig Medic,

must be currently certified as a level two first aid attendant, while the remaining team members must be certified as level one first aid attendants.

5.4.6 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.

5.4.7 Fast Rescue Craft (FRC) 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 Craft. 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.

6 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* (see Figure 6-1) must be completed by the operator and distributed in accordance with Section 'E' of the Form. Where an exemption relates to survival training, the helicopter contractor, or vessel master where the individual is to be transported via standby vessel, must also be notified. The energy authority will monitor all exemptions and will notify the operator in question regarding any specific or general problem or concern. The energy authority reserves the right to deny any exemption or to issue an order to an operator relating to exemptions if the process is abused.

Equivalency Procedure

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

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

Training and Qualification Exemption Notification Form

A. GENERAL INFORMATION

Operator: _____ Installation: _____
 Name: _____ Position: _____ Company: _____
 Date of Birth: _____ Date of Last Medical (Attach copy): _____
 Course/Qualification Exempted From: _____
 Duration of Exemption: _____

B. REASON FOR EXEMPTION

C. PLAN TO ACHIEVE COMPLIANCE

D. INTERIM MITIGATION MEASURES

E. APPROVALS

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

F.. DISTRIBUTION

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

Figure 6-1 Training and Qualification Exemption Notification Form

7 Recognition of Certificates

Where the Committee specifies a training requirement in this document the committee may list training certificates that are recognized as meeting that requirement. This list is provided for the guidance of users and the list does not preclude the use of other training courses and approaches, which meet the intent of the Standard Practice. In the event an operator uses an alternate approach, the energy authority and appropriate personnel must be notified and the equivalency documented as explained in Chapter 6 of this document.

The Committee lists a certificate as being “recognized” where the Committee on the basis of the membership’s first hand knowledge or substantiated documentary evidence is satisfied that:

1. The course meets the criteria and objectives set out in this Standard Practice;
2. The qualifications of the instructors and the instructor – student ratio is such that the training can be delivered effectively; and
3. The institution, company or individual delivering the training has access to equipment and facilities that are appropriate to deliver the training.

The Committee may also list, as “recognized”, certificates from courses that have been accredited or approved by reputable government or industry bodies (e.g. Transport Canada). It is not the Committee’s intention to list all courses, but simply to provide a list of some locally available or internationally recognized courses for the information of document users. We also note that the Committee does not accredit or approve courses or training institutions, nor do we formally audit courses. The Committee does make its best effort to monitor the quality of course delivery through the resources and participation of our individual members.

Appendix A Terms of Reference

The Canadian East-Coast Offshore Petroleum Training and Qualifications Committee

Terms of Reference

1. The Atlantic Canada Offshore Petroleum Training and Qualifications Committee (the Committee) is *formed voluntarily* by the Canada–Newfoundland Offshore Petroleum Board; the Canada–Nova Scotia Offshore Petroleum Board; (the Boards), the Canadian Association of Oilwell Drilling Contractors (CAODC), and the Canadian Association of Petroleum Producers (CAPP) to develop and maintain the Atlantic Canada Offshore Petroleum Industry: Standard Practice for the Training and Qualifications of Offshore Personnel (Standard Practice). The appointed members of the Committee will be named by their respective organizations.
2. The Committee shall be made up of one representative from each of the Boards, two representatives of the CAODC and three representatives of CAPP. The Committee will select a chairperson from the membership for a two-year term.
3. The Committee will retain the services of a competent consultant and/or a CAPP employee to act as secretary and to write, edit and maintain the *Standard Practice* in accordance with the wishes of the Committee. The secretary shall schedule and issue agendas for all meetings and maintain records of all Committee decisions under the supervision of the Chairperson.
4. Named members may have alternates attend meetings in their absence. However a Quorum will consist of four “named members” and must include a representative from *at least* one of the Boards. All Committee decisions will be made by consensus.
5. The Committee reports to the Boards and the CAPP Atlantic Canada Committee. All major decisions *made and* any public documents produced by the Committee will be referred to these groups for ratification.
6. The Committee will consult other affected parties such as offshore workforces and training institutes as and when necessary. Every effort will be made to consult affected parties before decisions are made.
7. The Atlantic Canada Offshore Petroleum Industry: Standard Practice for the Training and Qualifications of Personnel, *once ratified by the Boards*, will apply to all offshore petroleum operations that are authorized by the Boards *to the extent the Standard Practice is consistent with the requirements laid down in applicable legislation. The Committee will endeavor to incorporate the best industry practice in the development and maintenance of the Standard Practice.*
8. The Board’s and the petroleum industry will use the Standard Practice to the extent practicable in *applying* applicable legislation and in providing appropriate levels of training and certification in accordance with good industry practice. The Standard Practice is not intended to be all inclusive and simple adherence to the Standard Practice may not be

sufficient to ensure an operator's or employer's obligations pursuant to relevant applicable legislation.

9. CAPP is the custodian of the Standard Practice and the Boards will administer the Standard Practice. It is recognized that the legislation and orders of the Board's Safety Officers made pursuant to the legislation take precedence over the Standard Practice.
10. For any specific requirement laid down in the Standard Practice the Boards may, ***subject to the legislation***, accept an alternate measure, approach, training course or certificate where they are satisfied that the alternate provides for an equivalent or satisfactory level of competence and safety.
11. The Committee will submit a revised edition of the Standard Practice to the Boards and the CAPP Atlantic Canada Committee for ratification annually for the next three years starting on November 1, 2000 and at such frequency thereafter as may be determined by the Committee.

Appendix B Glossary

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

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

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

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

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

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

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

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

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

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

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

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

installation - a drilling installation or a production installation.

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

level two first aid attendant - a qualified person who is the holder of valid certificates issued for the successful completion of either an advanced first aid course of at least five days duration

or a mariners first aid course of at least five days duration, and in cardiopulmonary resuscitation (CPR).

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

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

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

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

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

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

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

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

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

recognized physician - a currently registered medical practitioner recognized by a training institution as having acquired knowledge of the potentially stressful and vigorous nature of certain elements of a specified training course that will enable him to assess the medical capability of a person to participate fully in the course.

recognized training institution - an institution recognized by the Training and Qualifications Committee as having the facilities necessary to enable an applicant to fulfill the objectives of a training course and obtain a certificate.

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 - a drilling installation that is certified to navigate independently.

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

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

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