



## **OPITO APPROVED STANDARD**

**Basic Offshore Safety Induction  
and Emergency Training (with Compressed Air  
Emergency Breathing System),**

**Helicopter Underwater Escape Training (with  
Compressed Air Emergency Breathing System)**

**and**

**Further Offshore Emergency Training (with  
Compressed Air Emergency Breathing System)**

<b>Standard Title</b>	<b>Standard Code</b>
Basic Offshore Safety Induction and Emergency Training (BOSIET) with Compressed Air Emergency Breathing System (CA-EBS)	5750
Helicopter Underwater Escape Training (HUET) with Compressed Air Emergency Breathing System (CA-EBS)	5295
Further Offshore Emergency Training (FOET) with Compressed Air Emergency Breathing System (CA-EBS)	5850

## **OPITO STANDARDS**

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The contents of this document were developed by an industry workgroup facilitated and supported by OPITO. The workgroup consisted of representation from a cross section of oil and gas industry employers, discipline experts working within the industry and members of the OPITO Approved Training network.

This standard has been verified and accepted through the governance and integrity management model for OPITO standards.

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<b>AMENDMENTS</b>					
<b>Amendment and Date</b>		<b>Section/ Pages</b>	<b>Changes made by</b>	<b>Checked by</b>	<b>Approved by</b>
	January 2016 – New Standard developed to capture Compressed Air Breathing system training requirements to meet UK Aviation Regulation requirements	All	SM	RAM	SAA
1	January 2016 – Inclusion of additional sea survival learning outcomes in FOET Module	C5, C8	SM	SA	RAM
2	February 2016 – inclusion of additional clarity on CA-EBS practical exercises	A8(page 22) B8(page 38) C8(page 47)	SM	SA	RAM
3	June 2016 – retitling of Standard(s)	All	SM	SA	OD
4	June 2016 - Amended Crane/Hoist Operators section j to read “requirements f-i”, as opposed to a-d.	page 52	SA	SM	

Any amendments made to this standard by OPITO will be recorded above.

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## Introduction and Course Description

### **Basic Offshore Safety Induction Emergency Training (BOSIET) with Compressed Air Emergency Breathing System (CA-EBS)\***

Oil and Gas companies worldwide seek to ensure that everyone travelling to one of their offshore assets (production platform, drill rig, [FPSO](#) etc.) must have completed an appropriate offshore safety and emergency training course before being allowed to travel to their offshore asset.

The OPITO-approved BOSIET (Basic Offshore Safety Induction and Emergency Training) with Compressed Air Breathing System (CA-EBS) course provides the delegate with a range of knowledge and skills relevant to travelling offshore by helicopter and working offshore, including safety induction, fire safety and basic firefighting; first aid; using a CA-EBS; helicopter safety and escape; and survival at sea.

Upon completion of the course the delegate will have an awareness of the generic hazards and associated risks encountered when working on offshore installations and the generic safety regimes and safety management systems in place to control and mitigate risks associated with hazards.

The BOSIET (with CA-EBS) will also equip participants with the knowledge, skills and confidence to respond appropriately in the event of an offshore emergency and to enhance their survivability through proper use of emergency equipment and procedures.

### **Helicopter Underwater Escape Training (HUET) with Compressed Air Emergency Breathing System (CA-EBS)\***

The OPITO-approved HUET with Compressed Air Breathing System (CA-EBS) training programme is designed for personnel travelling to offshore installations/vessels via helicopter when issued with a Compressed Air Breathing System (CA-EBS).

This course provides delegates with the necessary skills and knowledge in emergency response related to using the CA-EBS and helicopter safety and escape.

**NOTE:** This course is essentially the HUET module of the BOSIET (with CA-EBS) standard, therefore training Providers wishing to deliver this Standard as a standalone course must hold [BOSIET/FOET](#) (with CA-EBS) OPITO approval.

### **Further Offshore Emergency Training (FOET) with Compressed Air Emergency Breathing System (CA-EBS)\***

The OPITO-approved Further Offshore Emergency Training programme with Compressed Air Emergency Breathing System (CA-EBS) is a 1-day course which must be undertaken by individuals who have a valid BOSIET (with CA-EBS), BOSIET, TBOSIET, FOET (with CA-EBS), FOET or TFOET certificate. The FOET (with CA-EBS) certificate re-validates a delegate's offshore emergency training for a further 4 years.

\*Note: These OPITO Standards have been developed specifically to meet Aviation Regulation requirements in the UK. We anticipate that OPITO Approved Training Providers will be able to offer combined training solutions for delegates with multiple emergency breathing system training requirements.

## **SECTION A Basic Offshore Safety Induction Emergency Training (BOSIET) with Compressed Air Emergency Breathing System (CA-EBS)**

### **A.1 Target Group for the BOSIET (with CA-EBS)**

This training programme is designed to meet the initial offshore safety and emergency response training requirements for personnel new (or returning) to the offshore oil and gas industry who will be supplied with a compressed air emergency breathing system (CA-EBS) during offshore helicopter travel.

### **A.2 Delegate pre-requisites for the BOSIET (with CA-EBS)**

No training pre-requisites are required.

### **A.3 Physical and stressful demands of the BOSIET (with CA-EBS)**

Training and/or assessment activities contained within this Standard may include physically demanding and potentially stressful elements. All personnel who participate in such activities must be physically and mentally capable of participating fully.

Therefore, OPITO-approved training centres are required, as a minimum, to ensure that prior to participating in practical exercises the delegate either:

- a) Possess a valid, current offshore medical certificate **or**
- b) Possess an employing company approved medical certificate equivalent to an offshore medical certificate, **or**
- c) Undergoes medical screening by completing an appropriate medical screening form provided by the OPITO-approved centre (a list of medical conditions which could be included in a medical screening form is available from OPITO).

The OPITO-approved Centre shall keep a record of the delegate's/candidate's declaration of fitness in accordance with their document control policy(s) or procedures.

This information, along with summary details of the type of physical activities the delegate/candidate will be asked to perform, will be given to delegates/candidates by the OPITO-approved Centre and, if applicable, to their sponsoring company as part of the joining instructions. The responsibility for declaring any current or pre-existing medical conditions that could have adverse effects to the individual's state of health while undertaking the training and/or assessment activities lies with the delegate/candidate and/or company sponsoring the delegate.

Where doubt exists regarding the fitness of any delegate/candidate, the OPITO-approved Centre should direct the individual to consult a medical officer familiar with the nature and extent of the training.

**Note: Practical exercises should be designed and delivered solely to meet this standard, and must not place on the delegates any physical or mental demands other than those required to meet the Standard.**

#### **A.4 Aim and objectives of the BOSIET (with CA-EBS)**

The aim of the BOSIET (with CA-EBS) is to introduce delegates to the specific safety issues and regimes relevant to offshore installations, and to equip them with the basic emergency response knowledge and skills for travelling to and from offshore installations by helicopter.

The objectives of the BOSIET (with CA-EBS) Training are that delegates will be able to:

- (a) Identify the generic hazards which are specific to offshore oil and gas installations, potential risks associated with those hazards, and how controls are put in place to eliminate or reduce risks.
- (b) Identify key offshore related safety regulations and explain the basic safety management concepts
- (c) Demonstrate, in a simulated environment, that they can use the safety equipment, and follow procedures in preparing for, and during helicopter emergencies – with particular focus on escaping from a helicopter following ditching
- (d) Demonstrate sea survival and first aid techniques
- (e) Demonstrate that they can effectively use basic firefighting equipment, and practise self-rescue techniques in low visibility situations, to include smoke filled areas.



## **A.5 Learning outcomes of the BOSIET (with CA-EBS)**

The learning outcomes are specified for each of the following modules; they are:

### **MODULE 1 Learning Outcomes                      Safety Induction**

To successfully complete this module, delegates must be able to:

- (1) Identify the main offshore hazards and hazard effects/consequences; explain their associated risks, and how they are controlled.
- (2) Explain the potential environmental impact of offshore installation operations.
- (3) Identify key offshore installation safety regulations and explain the basic concept of these regulations.
- (4) Explain the principles of managing safety on offshore installations.
- (5) State the procedure for prescribed medicines offshore.
- (6) Explain the concept of alcohol and substance abuse policy.
- (7) Explain [PPE](#) requirements of working on an offshore installation.
- (8) Explain how to report incidents, accidents and near misses on an offshore installation.
- (9) Explain the role of the Offshore Medic.

## MODULE 2 Learning Outcomes

## Helicopter Safety and Escape

To successfully complete this training, delegates must be able to **demonstrate**:

- (1) Donning of an aviation transit suit, an aviation lifejacket, compressed air emergency breathing system (CA-EBS) equipment and conducting integrity checks of the CA-EBS equipment, including buddy checks
- (2) Deploying (left and right hand) and breathing from CA-EBS equipment at atmospheric pressure in dry conditions
- (3) Actions to take in preparing for a helicopter emergency landing
- (4) Following instruction from the crew, location of CA-EBS equipment and evacuation from a helicopter using a nominated exit, following a controlled emergency descent to a dry landing (conducted in helicopter simulator at poolside on dry land)
- (5) Actions to be taken in preparing for an in-water ditching including location of exit, deploying and breathing from CA-EBS equipment at atmospheric pressure in dry conditions (conducted in helicopter simulator at poolside on dry land)
- (6) Dry evacuation, using a nominated exit, to an aviation life raft from a helicopter ditched on water (and, on instructions from the aircrew, operation of a push out window), assisting others where possible and carrying out initial actions on boarding the aviation life raft, to include: mooring lines, deploying the sea anchor, raising the canopy and raft maintenance\*
- (7) Escaping through a window opening which is underwater, from a partially submerged helicopter (without operation of a push out window)\*
- (8) Escaping through a window opening which is underwater, from a partially submerged helicopter (with operation of a push out window)\*
- (9) Escaping through a window opening which is underwater, from a capsized helicopter (without operation of a push out window)\*
- (10) Inflation of an aviation lifejacket, deployment of a spray visor and boarding of an aviation life raft from the water\*

**\*Note: CA-EBS equipment must not be worn during Learning Outcomes 6 thru 10.**

### MODULE 3 Learning outcomes

### Sea Survival

To successfully complete this module, delegates must be able to **demonstrate**:

- (1) Donning of a permanent buoyancy lifejacket prior to use in an emergency.
- (2) The correct actions when mustering and boarding a survival craft ([TEMPSC](#)) as a passenger during launching operations.
- (3) Fitting of a helicopter rescue device and correct body posture during winching.
- (4) Water entry (stepping off poolside, maximum height 1 metre) and the precautions to be taken when entering the water
- (5) Individual and group sea survival techniques, to include: swimming, getting into Heat Escape Lessening Position (HELP), wave-slap protection, towing, chain, huddle and circle.
- (6) Boarding a marine liferaft from the water.
- (7) \*Immediate first aid actions, including checking airways, breathing and industry recognised first aid practice\*\*

\*Immediate first aid actions - putting casualty in the recovery position: delegates must get instruction and demonstration **only** from instructors on putting a casualty into the recovery position but do not need to demonstrate this.

\*\* Industry recognised first aid practice – this may vary depending on first aid practice guidelines adopted in different countries/regions.

### MODULE 4 Learning Outcomes

### Firefighting and Self Rescue

To successfully complete this module, delegates must be able to **demonstrate**:

- (1) Correct use of hand held portable fire extinguishers and which ones to use for different classes of fires.
- (2) Self-rescue techniques with a smoke hood or partial blindfold from areas where delegate visibility is reduced.
- (3) Self-rescue techniques with a smoke hood or partial blindfold from areas where delegate visibility is completely obscured.
- (4) Small group escape techniques with a smoke hood or partial blindfold from areas where delegate visibility is completely obscured.

## **A.6 Delegate Performance Assessment**

Delegates will be assessed against the learning outcomes specified in section [A.5](#) using direct observation and oral and/or written questions as appropriate.

### **Formal evaluation of knowledge:**

Delegates will be required to undertake a written test at the end of Module 1 (duration: 30 minutes) as a method of checking that they have met all the Module 1 learning outcomes. The test will be 'open-book' and questions must be clearly referenced against specific Module 1 learning outcomes. There must be a minimum of two questions per learning outcome. All learning outcomes must be achieved during the written test.

Training instructors must identify any gaps in delegate's learning and make reasonable effort to address the gaps to help delegates meet the learning outcomes.

## A.7 Duration and timing of the BOSIET (with CA-EBS)

The optimum 'contact time' for this training is seen as **20 hours and 35 mins**.

Module 1 Safety Induction part is 100% theory. An approximate ratio of 40% theory to 60% practical is appropriate for the remaining modules. Where this training is part of a programme of longer duration the total contact time per day must not exceed 8 hours and the total training day must not exceed 10 hours. The total training day includes contact time, refreshment and meal breaks and travel between training sites where applicable.

The training staff will introduce each module by explaining aims, learning outcomes, timetable, assessment methods and training staff roles. The time taken for this is expected to be approximately 10 minutes for each module, and this is in addition to the timings stated in the table below.

**Table of BOSIET (with CA-EBS) Module/Element Timings**

Module		Element	Expected (approximate) Duration (minutes)	
1	Safety Induction	1.1	Industry and Installation Overview	30
		1.2	Offshore hazards	30
		1.3	Managing offshore safety	10
		1.4	Controlling offshore hazards	10
		1.5	Regulating offshore safety	20
		1.6	Living and working offshore	70
			Knowledge test (Question paper)	30
	<b>TOTAL</b>	<b>( 3 hrs 20 mins )</b>		
2	Helicopter Safety and Escape	2.1	Helicopter travel	25
		2.2	Helicopter emergencies	40
		2.3	Use of Compressed Air Emergency Breathing System (CA-EBS)	90
		2.4	Practical Helicopter Escape Techniques	215
			<b>TOTAL</b>	<b>( 6 hrs 10 mins )</b>
3	Sea Survival and First Aid	3.1	Evacuation (3.1.1 – 3.1.9)	35
		3.1	Evacuation (3.1.10 -3.1.18)	225
		3.2	Emergency first aid	120
			<b>TOTAL</b>	<b>( 6 hrs 20 mins )</b>
4	Fire Fighting and Self Rescue	4.1	Fire fighting offshore	110
		4.2	Self-Rescue	135
			<b>TOTAL</b>	<b>( 4 hrs 5 mins )</b>
		<b>GRAND TOTAL</b> (excluding introductions of 40 mins)	<b>( 19 hrs 55 mins )</b>	

The contact time\* is based on the maximum number of delegates/candidates undertaking the programme.

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Where stated, individual module/unit/element timings that are specified within the standard must be adhered to.

The contact time must not exceed 8 hours in any one day and the **\*\*total programme day** must not exceed 10 hours.

Practical and theory sessions must contain adequate breaks for delegate welfare.

**\*Contact time** includes the following:

- (i) delegate/candidate enrolment and certification process
- (ii) delivery of the theoretical and practical training/assessment programme.

**\*\*The total programme day** includes: contact time, welfare breaks, meal breaks and where applicable, travel between sites.

## A.8 The BOSIET (with CA-EBS) Training Programme

The training programme provided below is designed to help delegates achieve the stated learning outcomes specified in [section A.5](#). The order in which elements of the training programme are delivered may vary. However, contents in [Appendix 1](#) must be covered prior to course commencement.

To make efficient use of time and ensure effective learning there should, wherever practicable, be an integration of the three phases of explanation, demonstration and practise. Full use should be made of audio/visual aids and course handout material. Training staff must give practical demonstrations for all training activities which delegates are required to practise and demonstrate.

Each module must be introduced by the training staff, and include:

- (a) **Aim** – The main purpose of the module
- (b) **Learning Outcomes** – What the delegates are expected to learn
- (c) **Timetable** – Training module duration and timing
- (d) **Assessment** – how delegates will be assessed and what they will be assessed against
- (e) **Staff** - who will be delivering the training and roles of training support staff.

The training course consists of the following **modules** and **elements**:

### **Module 1**      **Safety Induction**

- Element 1.1 Industry and Installation Overview
- Element 1.2 Offshore Hazards
- Element 1.3 Managing Offshore Safety
- Element 1.4 Controlling Offshore Hazards
- Element 1.5 Regulating Offshore Safety
- Element 1.6 Living and Working Offshore

### **Module 2**      **Helicopter Safety and Escape**

- Element 2.1 Helicopter Travel
- Element 2.2 Helicopter Emergencies
- Element 2.3 Use of Compressed Air Breathing System (CA-EBS)
- Element 2.4 Practical Helicopter Escape Techniques

### **Module 3**      **Sea Survival and First Aid**

- Element 3.1 Evacuation
- Element 3.2 Emergency First Aid

### **Module 4**      **Firefighting and Self Rescue**

- Element 4.1 Firefighting Offshore
- Element 4.2 Self-Rescue

## MODULE 1      Safety Induction

### ELEMENT 1.1      Industry and Installation Overview

Training staff to **explain**:

- 1.1.1 Typical offshore oil and gas activities.
- 1.1.2 Formation, finding and exploitation of oil and gas; how hydrocarbons are formed, found and produced.
- 1.1.3 Types of offshore installations, specialist vessels and their main functions and features; to include:
  - (a) Drilling – jack-up, semi-sub, drill ship
  - (b) Production - oil and gas, gas, fixed, floating
  - (c) Construction – heavy lift, pipe laying
  - (d) Accommodation - flotel
  - (e) Specialist vessels – standby, support, diving support.
- 1.1.4 The offshore environment, to include remote nature, harsh conditions, proximity of process/working/living environments)

### ELEMENT 1.2      Offshore Hazards

Training staff to **explain**:

- 1.2.1 Definitions of hazard, risk and control measures
- 1.2.2 Accident statistics; comparison with other industries
- 1.2.3 Environmental impact and statistics
- 1.2.4 Offshore hazards and comparative risk levels including:
  - (a) **Pressure hazards**, to include: oil/gas reservoir, process/drilling pipework, water/gas injection, gas and compression.
  - (b) **Motion hazards**, to include: drilling tubulars, exposed machinery parts, moving heavy equipment and manual handling.
  - (c) **Chemical hazards**, to include: drilling chemicals, reservoir fluids/gases (including H<sub>2</sub>S), process chemicals and solvents
  - (d) **Electrical hazards**, to include: maintenance of electrical equipment, faulty electrical equipment.
  - (e) **Gravity hazards**, to include: working under suspended loads, working at heights and slips and trips.
  - (f) **Noise hazards**, to include: working in process areas, drilling areas, helicopter areas and noise exposure levels.
  - (g) **Hazardous atmospheres**, to include an explanation of how areas are designated hazardous zones.
  - (h) **Confined space hazards**, to include the following characteristics: limited openings for entry or exits, confined spaces when working inside containers or vessels and unfavourable natural ventilation.



### **ELEMENT 1.3 Managing Offshore Safety**

Training staff to **explain**:

- 1.3.1 The multiple barriers model and systems in place to prevent hazards from contacting targets including:
  - (a) Safe Systems of Work (SSOW)
  - (b) Personal Responsibility for Safety (PRfS)
  - (c) Safety observation programmes.

### **ELEMENT 1.4 Controlling Offshore Hazards**

Training staff to **explain**:

- 1.4.1 The hierarchy of control and how control measures are implemented offshore
- 1.4.2 Determining risks and implementing control measures to include:
  - (a) Reservoir/pipe work isolation
  - (b) Blowout preventers (BOP)
  - (c) Training on handling tubulars
  - (d) Guarding of machinery
  - (e) MSDS/ chemical and dust protection
  - (f) Electrical isolation
  - (g) Fall protection
- 1.4.3 The consequences of failure to control the risks.

## **ELEMENT 1.5 Regulating Offshore Safety**

Training staff to **explain**:

- 1.5.1 How offshore safety is regulated; to include:
  - (a) Applicable legislation
  - (b) Legislative requirements
  - (c) Legal responsibilities
  - (d) Role of industry organisations
  - (e) Documenting the safety management systems.
- 1.5.2 Hierarchy of legislation.
- 1.5.3 Directives.
- 1.5.4 Safety Case regulations – identification of major hazards, risks and control measures, how safety is audited, acceptance by the health and safety regulator, verification of safety critical systems and performance standards.
- 1.5.5 Duties of employer and employees and concept of [ALARP](#).
- 1.5.6 How goals are set for prevention/protection and emergency response, emergency response planning and performance standards.
- 1.5.7 Role of the Health and Safety Authorities – scope, activities and powers of the Health and Safety Inspector.
- 1.5.8 Use of relevant ISO standards, to include ISO 14001.
- 1.5.9 Industry's expectations of personal safety behaviour, to include: the industry's expected standards for safety and typical behavioral safety tools.

## **ELEMENT 1.6 Living and Working Offshore**

Training staff to **explain**:

- 1.6.1 Fitness requirements and medical standards.
- 1.6.2 The procedure for taking prescribed medicines offshore.
- 1.6.3 Alcohol and substance abuse policies.
- 1.6.4 Offshore routine requirements and welfare, to include:
  - (a) Administration arrangements and requirements on arrival on an offshore installation.
  - (b) Items permitted/not permitted offshore.
  - (c) Installation induction
  - (d) Safety constituencies
  - (e) Role of safety representatives and safety committees
  - (f) Responsibilities of employers
  - (g) Employee line of reporting
  - (h) Cabin/laundry/bond
  - (i) Recreation /smoking
  - (j) Getting on with others.

Element 1.6 Living and Working Offshore: Continued.

1.6.5 Working routines to include:

- (a) Procedures
- (b) Work authorisation
- (c) Personal Protective Equipment (PPE)
- (d) Maintaining a safe workplace
- (e) Waste disposal
- (f) The right to stop unsafe work.

1.6.6 Involvement in safety, to include:

- (a) Observation systems
- (b) PTW
- (c) Toolbox talks
- (d) Safety meetings
- (e) Drills and exercises
- (f) Additional emergency response duties
- (g) Getting involved.

1.6.7 Communicating safety, including lines of communication

1.6.8 What to do when not satisfied with response to safety communication, to include contacting immediate supervisor, OIM, Safety Representative, health and safety regulator.

1.6.9 Injuries and illness, to include:

- (a) Reporting incidents, accidents, near misses and illnesses
- (b) The role of the offshore medic
- (c) First aid arrangements offshore
- (d) Investigation of incidents and accidents
- (e) Preventing a recurrence
- (f) Support available to relatives in the event of illness/injury/major incident/evacuation.

**Formal evaluation of knowledge (see A.6)**

## **MODULE 2 Helicopter Safety and Escape**

### **ELEMENT 2.1 Helicopter Travel**

Training staff to **explain**:

- 2.1.1 Pre-flight briefings
- 2.1.2 The \*procedures and requirements for pre-boarding, safe boarding, in-flight and safe disembarkation including:
  - (a) Arrival time
  - (b) Correct dress
  - (c) Documentation
  - (d) Prohibited articles
  - (e) Check-in procedures
  - (f) Safe boarding
  - (g) Pre-flight video

\*This is in addition to the information detailed during pre-flight briefings.

- 2.1.3 \*Delegates must be made aware that they should ensure they familiarise themselves with the aviation transit suit they are expected to use before boarding a helicopter.

\*Note: there are various types of aviation transit suits being used in the industry. Although one type of aviation transit suit will be used in the training centre where the delegate is trained, it is important that the delegate is made aware that other types will be used in other regions/areas.

### **ELEMENT 2.2 Helicopter Emergencies**

Training staff to **explain**:

- 2.2.1 Informing the crew of suspected or observed helicopter emergencies, to include:
  - (a) Discovering a fire
  - (b) Smoke
  - (c) Fuel leaks
  - (d) Abnormal conditions which the crew may not be aware of.
- 2.2.2 In-flight procedures to include:
  - (a) Don hood – ensure survival suit is zipped up
  - (b) Check seat belt is tight and lifejacket is secure
  - (c) Following crew instructions.
- 2.2.3 Aircraft basic flotation characteristics.
- 2.2.4 Aircraft escape routes for ditching and emergency landing.

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- 2.2.5 Independent action.
- 2.2.6 Survival techniques following ditching and emergency landing either on land or in water

Training staff to **explain** and **demonstrate**:

- 2.2.7 Donning a \*[aviation transit suit](#) (of a type typically used in the region/area of operations) compressed air breathing system (CA-EBS) and an aviation lifejacket.
- 2.2.8 Actions in preparation for a helicopter ditching and emergency landing, including brace positions for the range of seating locations and harness types.
- 2.2.9 Helicopter evacuation, to include:
  - (a) Locate
  - (b) Release (on-command)
  - (c) Evacuating through nominated exits and push-out windows: on-water, underwater and capsize.
  - (d) Impact attenuating seats, to include purpose and operation of seat, evacuation technique (demonstration not required, this will be achieved by the use of video or slides)
- 2.2.10 Emergency equipment onboard the helicopter, including stowage location of aviation liferaft, operation and entry.
- 2.2.11 **Initial** actions on boarding the aviation liferaft i.e. how to use mooring lines, deploying the sea anchor, raising the canopy and raft maintenance.
- 2.2.12 Use of aviation liferaft equipment and **secondary actions** on boarding the aviation liferaft, to include e.g. posting lookouts, activating the radio beacons and first aid (Note: Instructors do not need to demonstrate secondary actions)

### **ELEMENT 2.3 Use of Compressed Air Emergency Breathing System (CA-EBS)**

Training staff to **explain**:

- 2.3.1 The principles of compressed air emergency breathing systems (CA-EBS)
- 2.3.2 The components and elements of the CA-EBS, including:
  - (a) Hose (if fitted)
  - (b) Mouthpiece
  - (c) Cylinder
  - (d) Demand Valve
  - (e) Pressure indicator
  - (f) On/Off ratchet/knob (if fitted)
  - (g) On/Off Status Indicator (if fitted)
  - (h) Purge button
  - (i) Nose clip (if fitted)
  - (j) Charging Port

2.3.3 The operation of the compressed air EBS equipment in conjunction with other survival equipment:

- (a) Life jacket
- (b) Survival suit (including importance of correctly sized suit)
- (c) Personal Locator Beacon (PLB)

2.3.4 The hazards associated with compressed air EBS:

- (a) Medical hazards associated with lung over-expansion injuries
- (b) Gasp reflex associated with cold water entry shock
- (c) Coughing
- (d) Dislodged mouthpiece (accidental or intentional)
- (e) Accidental or deliberate loss of air including purging and hazards of incorrect purging
- (f) Running out of air

Training staff to **explain** and **demonstrate** and delegates to **practice**:

2.3.5 The pre-donning checks on the life jacket and compressed air EBS, including:

- (a) Pressure indicator reading
- (b) Appropriate on/off status indicator (if fitted)
- (c) Ratchet knob on/off (if fitted)

2.3.6 How to don the life jacket complete with compressed air EBS:

- (a) Ensuring life jacket waist belt is not twisted (if fitted)
- (b) Fastening of life jacket
- (c) Adjustment of waist belt to ensure correct fit
- (d) Engagement of crotch strap ensuring a correct fit and roll away and securing of excess webbing (if fitted)
- (e) Ensure CA-EBS mouthpiece is correctly fitted
- (f) Ensure CA-EBS hose is correctly fitted (where appropriate)

2.3.7 Deployment of CA-EBS, including:

- (a) One handed deployment of the mouthpiece and nose clip in accordance with manufacturers' guidelines
- (b) How to achieve a good seal around mouthpiece
- (c) How to purge water from the mouthpiece
- (d) How to recover a dislodged mouthpiece
- (e) Use of demand valve

## **ELEMENT 2.4      Practical helicopter escape techniques**

Following explanations and demonstrations by training staff: delegates to **practice** and **demonstrate**:

- 2.4.1 Donning of an aviation transit suit, an aviation lifejacket, compressed air emergency breathing system (CA-EBS) equipment and conducting integrity checks of the CA-EBS equipment, including buddy checks
- 2.4.2 Deploying (left and right hand) and breathing from CA-EBS equipment at atmospheric pressure in dry conditions
- 2.4.3 Actions to take in preparing for a helicopter emergency landing
- 2.4.4 Following instruction from the crew, location of CA-EBS equipment and evacuation from a helicopter using a nominated exit, following a controlled emergency descent to a dry landing (conducted in helicopter simulator at poolside on dry land)
- 2.4.5 Actions to be taken in preparing for an in-water ditching including location of exit, deploying and breathing from CA-EBS equipment at atmospheric pressure in dry conditions (conducted in helicopter simulator at poolside on dry land)
- 2.4.6 Dry evacuation, using a nominated exit, to an aviation life raft from a helicopter ditched on water (and, on instructions from the aircrew, operation of a push out window), assisting others where possible and carrying out initial actions on boarding the aviation life raft, to include: mooring lines, deploying the sea anchor, raising the canopy and raft maintenance\*
- 2.4.7 Escaping through a window opening which is underwater, from a partially submerged helicopter (without operation of a push out window)\*
- 2.4.8 Escaping through a window opening which is underwater, from a partially submerged helicopter (with operation of a push out window)\*
- 2.4.9 Escaping through a window opening which is underwater, from a capsized helicopter (without operation of a push out window)\*
- 2.4.10 Inflation of an aviation lifejacket, deployment of a spray visor and boarding of an aviation life raft from the water\*

**\*Note: CA-EBS equipment must not be worn during exercises 2.4.6 thru 2.4.10**

## MODULE 3      **Sea Survival and First Aid**

### ELEMENT 3.1      **Evacuation**

Training staff to **explain**:

- 3.1.1 Typical types of offshore \*installation emergencies
- 3.1.2 Station bills
- 3.1.3 Various means of escape
- 3.1.4 Actions to be taken prior to, during and after selective evacuation or escape from an offshore installation.
- 3.1.5 Installation emergency knowledge required of all personnel onboard, to include:
  - (a) Typical layout of installations (escape routes, temporary refuge, muster locations, abandonment locations, access routes including helideck, bridge landing points and tertiary escape points)
  - (b) Installation alarms and communications (locations, use and appropriate response)
  - (c) The possibility of devolved command within the installation's organisational structure and appropriate procedures and actions should this occur
  - (d) The need for and use of personal protective equipment (PPE) e.g. gloves, torch, smoke hoods, survival/abandonment suits and donning a life jacket etc.
- 3.1.6 The [SAR](#) organisation, means of rescue from the sea and survival craft and actions to take during rescue
- 3.1.7 Rescue by helicopter – winchman duties, the hi-line, double lift and single lift (as a minimum: the single lift to be demonstrated practically),
- 3.1.8 The importance of appropriate personal clothing
- 3.1.9 Methods of rescue i.e. standby vessel, [FRC](#), [MRRD](#), net, basket and ladder (this may be achieved by the use of video or slides)

\*Installations: to include floating installations such as FPSOs and drilling rigs.

(The information in 3.1.5 (a) to (d) is in addition to the information detailed during installation briefings.)



Element 3.1 Evacuation: Continued

Training staff to **explain**:

- 3.1.10 The various types of survival craft ([TEMPSC](#)) – freefall/single/twin
- 3.1.11 The function and capabilities of TEMPSC (e.g. air supply, fire protection, buoyancy)
- 3.1.12 The procedure for mustering, boarding and strapping in, including the safety precautions during lowering and release, emergency equipment and supplies
- 3.1.13 The various methods of tertiary escape (this may be achieved by the use of video or slides) to include:
  - (a) Knotted rope
  - (b) Scramble net
  - (c) Davit-launched liferaft
  - (d) Ladders
  - (e) Person descending escape devices

**Note:** Minimum of one of the above methods is to be demonstrated practically.

Following explanations and demonstrations by training staff: delegates to **practice** and **demonstrate**:

- 3.1.14 Mustering, donning a life jacket, boarding and strapping in as a TEMPSC passenger (the craft then to be lowered into water and released).
- 3.1.15 Water entry (stepping off poolside, maximum 1m height) and the precautions when entering the water
- 3.1.16 The fitting of a helicopter rescue device, subsequent lifting and (simulated) entry into a rescue helicopter including:
  - (a) Single strop, double strop or basket (minimum of one method to be demonstrated practically)
  - (b) Body posture
  - (c) Aircraft entry
- 3.1.17 In-water survival techniques, to include: individual (swimming, HELP, wave slap protection) and group survival techniques (towing, chain, huddle and circle), followed by rescue by one of the recognised methods available offshore.
- 3.1.18 Boarding a marine liferaft from the water and carrying out **initial** actions, to include mooring lines, deploying the sea anchor, raft maintenance and **secondary** actions, to include posting lookouts, activating the radio beacons and first aid equipment. (Note: Instructors need only explain secondary actions i.e. no need for instructors or delegates to demonstrate).

### **ELEMENT 3.2    Emergency First Aid**

**Note:** Emergency first aid training will normally be delivered along with sea survival and must include first aid actions suitable for use in a liferaft and [TEMPSC](#).

Training staff to **explain**:

- 3.2.1      First aid arrangements
- 3.2.2      Types of injuries, to include:
  - (a) Bleeding/burns (immediate action)
  - (b) Chemical contact
  - (c) Exposure to the elements (heat and cold)
- 3.2.3      Prioritising actions.
- 3.2.4      Immediate first aid actions suitable for use prior to the arrival of the medic/first-aider, to include:
  - (a) Assessing the situation – do not put yourself (or others) in danger.
  - (b) Making the area safe.
  - (c) Assess all casualties and attend to any **unconscious** casualties.
  - (d) Send for help as soon as possible.

Training staff to **explain** and **demonstrate**:

- 3.2.5      Raising the alarm
- 3.2.6      Assessing the situation
- 3.2.7      Checking the area is safe
- 3.2.8      Checking airways, breathing and industry recognised first aid practice\*
- 3.2.9      Putting the casualty in the recovery position

Delegates to **practice** and **demonstrate**:

- 3.2.10     Raising the alarm
- 3.2.11     Assessing the situation
- 3.2.12     Checking area is safe
- 3.2.13     Industry recognised first aid practice\*

\* Industry recognised first aid practice – this may vary depending on first aid practice guidelines adopted in different countries/regions.

## **MODULE 4      Firefighting and Self Rescue**

### **ELEMENT 4.1      Firefighting Offshore**

Training staff to **explain**:

- 4.1.1 The common causes and nature of fires onboard offshore oil and gas installations with an emphasis on electrical, domestic and welding related fires.
- 4.1.2 The “triangle of combustion” and how fire can spread, to include: conduction, convection and radiation.
- 4.1.3 Extinguishing media; to include: water, dry powder, foam and CO<sub>2</sub>.
- 4.1.4 The purpose of fixed fire and gas detection and firefighting systems.
- 4.1.5 Actions and precautions to take in areas where these systems are deployed in respect of those having an effect on a person’s health and safety i.e. deluge, halon (and halon replacement extinguishant), CO<sub>2</sub>, and the urgent need to evacuate the area if the extinguishant has been released.

More detailed information on fire equipment and procedures specific to an installation will be included in installation safety briefings.

Training staff to **explain**:

- 4.1.6 Action on discovering a fire (installation emergency procedures) with emphasis on:
  - (a) Raising the alarm (give examples of methods for raising the alarm)
  - (b) Typical locations of portable hand held firefighting equipment (types to be used during practical session)
  - (c) Evacuation to designated area.

Training staff to **explain** and **demonstrate**:

- 4.1.7 The operation of hand held portable fire extinguishers, small bore fire hose reels, fire blankets and their use against actual Class A and Class B fires as appropriate.

Each delegate to **practice** and **demonstrate**:

- 4.1.8 Raising the alarm on discovery of a fire
- 4.1.9 The correct operation of hand held portable fire extinguishers in extinguishing Class A or Class B fires. (See note 3 below).

#### Notes for Element 4.1:

- (1) All practical sessions involving the use of the above equipment should include the appropriate procedure on discovering a fire with emphasis on raising the alarm.
- (2) The learning outcomes of this standard will be satisfied when each delegate practices the operation and use of **each** of the following types of fire extinguisher:
  - (a) Water or foam
  - (b) CO<sub>2</sub>
  - (c) Dry chemical
- (3) Although class A and B fuels must be used for demonstration fires by staff, simulation using [LPG](#) may be used for delegate practical exercises.

#### ELEMENT 4.2 Self-Rescue

Training staff to **explain** and **demonstrate**:

- 4.2.1 Selection of smoke hood types.
- 4.2.2 Donning and use of smoke hoods.
- 4.2.3 Self-rescue techniques with and without respiratory protection from areas which are being subjected to smoke and heat.
- 4.2.4 Small group escape techniques with respiratory protection from an area which is being subjected to smoke and heat.

Delegates to **practice** and **demonstrate**:

- 4.2.5 Donning and use of smoke hood.
- 4.2.6 Self-rescue techniques with a smoke hood or partial blindfold from areas where delegate visibility is reduced.
- 4.2.7 **\*\*Self-rescue techniques with a smoke hood or partial blindfold from areas where delegate visibility is completely obscured.**
- 4.2.8 **\*\*Small group escape techniques with a smoke hood or partial blindfold from areas where delegate visibility is completely obscured concluding with a muster exercise**

**\*\*This exercise may be achieved by conducting exercises in darkness or by using “blacked out” smoke hoods or partial blindfolds.**

**Note:** smoke hoods to be used in cosmetic smoke only.

## **SECTION B Helicopter Underwater Escape Training (HUET) with Compressed Air Emergency Breathing System (CA-EBS)**

### **B.1 Target Group for the HUET (with CA-EBS)**

The target group is personnel travelling to oil and gas installations/facilities via helicopter supplied with a Compressed Air Emergency Breathing System (CA-EBS).

### **B.2 Delegate pre-requisites for the HUET (with CA-EBS)**

No training pre-requisites are required.

### **B.3 Physical and stressful demands of HUET (with CA-EBS)**

Training and/or assessment activities contained within this Standard may include physically demanding and potentially stressful elements. All personnel who participate in such activities must be physically and mentally capable of participating fully.

Therefore, OPITO-approved training centres are required, as a minimum, to ensure that prior to participating in practical exercises the delegate either:

- a) Possess a valid, current offshore medical certificate **or**
- b) Possess an employing company approved medical certificate equivalent to an offshore medical certificate, **or**
- c) Undergoes medical screening by completing an appropriate medical screening form provided by the OPITO-approved centre (a list of medical conditions which could be included in a medical screening form is available from OPITO).

The OPITO-approved Centre shall keep a record of the delegate's/candidate's declaration of fitness in accordance with their document control policy(s) or procedures.

This information, along with summary details of the type of physical activities the delegate/candidate will be asked to perform, will be given to delegates/candidates by the OPITO-approved Centre and, if applicable, to their sponsoring company as part of the joining instructions. The responsibility for declaring any current or pre-existing medical conditions that could have adverse effects to the individual's state of health while undertaking the training and/or assessment activities lies with the delegate/candidate and/or company sponsoring the delegate.

Where doubt exists regarding the fitness of any delegate/candidate, the OPITO-approved Centre should direct the individual to consult a medical officer familiar with the nature and extent of the training.

**Note: Practical exercises should be designed and delivered solely to meet this standard, and must not place on the delegates any physical or mental demands other than those required to meet the Standard.**

#### **B.4 Aim and objectives of HUET (with CA-EBS)**

The aim of the HUET (with CA-EBS) programme is to prepare delegates that intend to travel to and from offshore oil and gas installations and vessels by helicopter by providing specific training in pre-flight and in-flight requirements and to equip delegates with the basic emergency response knowledge and skills required in the event of a helicopter emergency – with specific focus on escaping from a helicopter following ditching.

The objectives of the HUET (with CA-EBS) Training are that delegates will be able to:

- (a) Demonstrate, in a simulated environment, that they can use the safety equipment, and follow procedures in preparing for, and during helicopter emergencies – with particular focus on escaping from a helicopter following ditching

## **B.5 Learning outcomes of the HUET (with CA-EBS)**

The learning outcomes are specified for each of the following modules; they are:

### **MODULE 1 Learning Outcomes Helicopter Safety and Escape**

To successfully complete this training, delegates must be able to **demonstrate**:

- (1) Donning of an aviation transit suit, an aviation lifejacket, compressed air emergency breathing system (CA-EBS) equipment and conducting integrity checks of the CA-EBS equipment, including buddy checks
- (2) Deploying (left and right hand) and breathing from CA-EBS equipment at atmospheric pressure in dry conditions
- (3) Actions to take in preparing for a helicopter emergency landing
- (4) Following instruction from the crew, location of CA-EBS equipment and evacuation from a helicopter using a nominated exit, following a controlled emergency descent to a dry landing (conducted in helicopter simulator at poolside on dry land)
- (5) Actions to be taken in preparing for an in-water ditching including location of exit, deploying and breathing from CA-EBS equipment at atmospheric pressure in dry conditions (conducted in helicopter simulator at poolside on dry land)
- (6) Dry evacuation, using a nominated exit, to an aviation life raft from a helicopter ditched on water (and, on instructions from the aircrew, operation of a push out window), assisting others where possible and carrying out initial actions on boarding the aviation life raft, to include: mooring lines, deploying the sea anchor, raising the canopy and raft maintenance\*
- (7) Escaping through a window opening which is underwater, from a partially submerged helicopter (without operation of a push out window)\*
- (8) Escaping through a window opening which is underwater, from a partially submerged helicopter (with operation of a push out window)\*
- (9) Escaping through a window opening which is underwater, from a capsized helicopter (without operation of a push out window)\*
- (10) Inflation of an aviation lifejacket, deployment of a spray visor and boarding of an aviation life raft from the water\*

**\*Note: CA-EBS equipment must not be worn during Learning Outcomes 6 thru 10.**



## **B.6 Delegate Performance Assessment**

Delegates attending this training programme will be given a series of explanations and demonstrations by training staff which will identify what they are expected to know and do whilst preparing for and during normal helicopter travel and how to respond to helicopter emergencies. This will be followed by practical exercises which will allow delegates to practice and demonstrate their emergency response skills, knowledge and understanding in the case of a helicopter emergency.

Delegates will be assessed against the learning outcomes specified in section [B.5](#) using direct observation.

Training instructors must identify any gaps in delegate's learning and make reasonable effort to address the gaps to help delegates meet the learning outcomes.

## B.7 Duration and timing of the HUET (with CA-EBS)

The optimum 'contact time' for this training is seen as **6 hours and 10 minutes** as indicated in the table below.

Where this training is part of a programme of longer duration the total contact time per day must not exceed 8 hours and the total training day must not exceed 10 hours. The total training day includes contact time, refreshment and meal breaks and travel between training sites where applicable.

The course will require the trainer to explain aims, learning outcomes, timetable, assessment methods and training staff roles. The time taken for this is expected to be approximately 10 minutes, and this is in addition to the timings stated in the table below.

**Table of HUET Module/Element Timings**

Module		Element	Expected (approximate) Duration (minutes)
1	Helicopter Safety and Escape	1.1 Helicopter travel	25
		1.2 Helicopter emergencies	40
		1.3 Use of Compressed Air Emergency Breathing System (CA-EBS)	90
		1.4 Practical Helicopter Escape Techniques using CA-EBS	215
		<b>TOTAL</b>	<b>( 6 hrs 10 mins )</b>

The contact time\* is based on the maximum number of delegates/candidates undertaking the programme.

Where stated, individual module/unit/element timings that are specified within the standard must be adhered to.

The contact time must not exceed 8 hours in any one day and the \*\*total programme day must not exceed 10 hours.

Practical and theory sessions must contain adequate breaks for delegate welfare.

\***Contact time** includes the following:

- (iii) delegate/candidate enrolment and certification process
- (iv) delivery of the theoretical and practical training/assessment programme.

\*\*The **total programme day** includes: contact time, welfare breaks, meal breaks and where applicable, travel between sites.

## B.8 The HUET (with CA-EBS) Training Programme

The training programme provided below is designed to help delegates achieve the stated learning outcomes specified in [section B.5](#). The order in which elements of the training programme are delivered may vary. However, contents in [Appendix 1](#) must be covered prior to course commencement.

To make efficient use of time and ensure effective learning there should, wherever practicable, be an integration of the three phases of explanation, demonstration and practice. Full use should be made of audio / visual aids and course handout material. Training staff should give practical demonstrations for all training activities which delegates are required to practice and demonstrate.

Prior to the start of the module, the following must be included as part of the introduction by training staff:

- (a) **Aim** – The main purpose of the module
- (b) **Learning Outcomes** – What the delegates are expected to learn
- (c) **Timetable** – Training module duration and timing
- (d) **Assessment** – how delegates will be assessed and what they will be assessed against
- (e) **Staff** – who will be delivering the training and roles of training support staff.

The training course consists of the following **module** and **elements**:

<b><u>Module 1</u></b>	<b>Helicopter Safety and Escape</b>
Element 1.1	Helicopter Travel
Element 1.2	Helicopter Emergencies
Element 1.3	Use of Compressed Air Emergency Breathing System (CA-EBS)
Element 1.4	Practical Helicopter Escape Techniques

## **MODULE 1 Helicopter Safety and Escape**

### **ELEMENT 1.1 Helicopter Travel**

Training staff to **explain**:

1.1.1 Pre-flight briefings

1.1.2 The \*procedures and requirements for pre-boarding, safe boarding, in-flight and safe disembarkation including:

- (a) Arrival time
- (b) Correct dress
- (c) Documentation
- (d) Prohibited articles
- (e) Check-in procedures
- (f) Safe boarding
- (g) Pre-flight video

\*This is in addition to the information detailed during pre-flight briefings.

1.1.3 \*Delegates must be made aware that they should ensure they familiarise themselves with the aviation transit suit they are expected to use before boarding a helicopter.

\*Note: there are various types of aviation transit suits being used in the industry. Although one type of aviation transit suit will be used in the training centre where the delegate is trained, it is important that the delegate is made aware that other types will be used in other regions/areas.

### **ELEMENT 1.2 Helicopter Emergencies**

Training staff to **explain**:

1.2.1 Informing the crew of suspected or observed helicopter emergencies, to include:

- (a) Discovering a fire
- (b) Smoke
- (c) Fuel leaks
- (d) Abnormal conditions which the crew may not be aware of.

1.2.2 In-flight procedures to include:

- (a) Don hood – ensure survival suit is zipped up
- (b) Check seat belt is tight and lifejacket is secure
- (c) Following crew instructions.

1.2.3 Aircraft basic flotation characteristics.

1.2.4 Aircraft escape routes for ditching and emergency landing.

1.2.5 Independent action.

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1.2.6 Survival techniques following ditching and emergency landing either on land or in water.

Training staff to **explain** and **demonstrate**:

1.2.7 Donning a \*[aviation transit suit](#) (of a type typically used in the region/area of operations) compressed air breathing system (CA-EBS) and an aviation lifejacket.

1.2.8 Actions in preparation for a helicopter ditching and emergency landing, including brace positions for the range of seating locations and harness types.

1.2.9 Helicopter evacuation, to include:

- (a) Locate
- (b) Release (on-command)
- (c) Evacuating through nominated exits and push-out windows: on-water, underwater and capsize.
- (d) Impact attenuating seats, to include purpose and operation of seat, evacuation technique (demonstration not required, this will be achieved by the use of video or slides)

1.2.10 Emergency equipment onboard the helicopter, including stowage location of aviation liferaft, operation and entry.

1.2.11 **Initial** actions on boarding the aviation liferaft i.e. how to use mooring lines, deploying the sea anchor, raising the canopy and raft maintenance.

1.2.12 Use of aviation liferaft equipment and **secondary actions** on boarding the aviation liferaft, to include e.g. posting lookouts, activating the radio beacons and first aid (Note: Instructors do not need to demonstrate secondary actions)

### **ELEMENT 1.3 Use of Compressed Air Emergency Breathing System (CA-EBS)**

Training staff to **explain**:

1.3.1 The principles of compressed air emergency breathing systems (CA-EBS)

1.3.2 The components and elements of the CA-EBS, including:

- (a) Hose (if fitted)
- (b) Mouthpiece
- (c) Cylinder
- (d) Demand Valve
- (e) Pressure indicator
- (f) On/Off ratchet/knob (if fitted)
- (g) On/Off Status Indicator (if fitted)
- (h) Purge button
- (i) Nose clip (if fitted)
- (j) Charging Port

1.3.3 The operation of the compressed air EBS equipment in conjunction with other survival equipment:

- (a) Life jacket
- (b) Survival suit (including importance of correctly sized suit)
- (c) Personal Locator Beacon (PLB)

1.3.4 The hazards associated with compressed air EBS:

- (a) Medical hazards associated with lung over-expansion injuries
- (b) Gasp reflex associated with cold water entry shock
- (c) Coughing
- (d) Dislodged mouthpiece (accidental or intentional)
- (e) Accidental or deliberate loss of air including purging and hazards of incorrect purging
- (f) Running out of air

Training staff to **explain** and **demonstrate** and delegates to **practice**:

1.3.5 The pre-donning checks on the life jacket and compressed air EBS, including:

- (a) Pressure indicator reading
- (b) Appropriate on/off status indicator (if fitted)
- (c) Ratchet knob on/off (if fitted)

1.3.6 How to don the life jacket complete with compressed air EBS:

- (a) Ensuring life jacket waist belt is not twisted (if fitted)
- (b) Fastening of life jacket
- (c) Adjustment of waist belt to ensure correct fit
- (d) Engagement of crotch strap ensuring a correct fit and roll away and securing of excess webbing (if fitted)
- (e) Ensure CA-EBS mouthpiece is correctly fitted
- (f) Ensure CA-EBS hose is correctly fitted (where appropriate)

1.3.7 Deployment of CA-EBS, including:

- (a) One handed deployment of the mouthpiece and nose clip in accordance with manufacturers' guidelines
- (b) How to achieve a good seal around mouthpiece
- (c) How to purge water from the mouthpiece
- (d) How to recover a dislodged mouthpiece
- (e) Use of demand valve

#### **ELEMENT 1.4      Practical helicopter escape techniques**

Following explanations and demonstrations by training staff: delegates to **practice** and **demonstrate**:

- 1.4.1 Donning of an aviation transit suit, an aviation lifejacket, compressed air emergency breathing system (CA-EBS) equipment and conducting integrity checks of the CA-EBS equipment, including buddy checks
- 1.4.2 Deploying (left and right hand) and breathing from CA-EBS equipment at atmospheric pressure in dry conditions
- 1.4.3 Actions to take in preparing for a helicopter emergency landing
- 1.4.4 Following instruction from the crew, location of CA-EBS equipment and evacuation from a helicopter using a nominated exit, following a controlled emergency descent to a dry landing (conducted in helicopter simulator at poolside on dry land)
- 1.4.5 Actions to be taken in preparing for an in-water ditching including location of exit, deploying and breathing from CA-EBS equipment at atmospheric pressure in dry conditions (conducted in helicopter simulator at poolside on dry land)
- 1.4.6 Dry evacuation, using a nominated exit, to an aviation life raft from a helicopter ditched on water (and, on instructions from the aircrew, operation of a push out window), assisting others where possible and carrying out initial actions on boarding the aviation life raft, to include: mooring lines, deploying the sea anchor, raising the canopy and raft maintenance\*
- 1.4.7 Escaping through a window opening which is underwater, from a partially submerged helicopter (without operation of a push out window)\*
- 1.4.8 Escaping through a window opening which is underwater, from a partially submerged helicopter (with operation of a push out window)\*
- 1.4.9 Escaping through a window opening which is underwater, from a capsized helicopter (without operation of a push out window)\*
- 1.4.10 Inflation of an aviation lifejacket, deployment of a spray visor and boarding of an aviation life raft from the water\*

**\*Note: CA-EBS equipment must not be worn during exercises 1.4.6 thru 1.4.10**

## **SECTION C Further Offshore Emergency Training (FOET) with Compressed Air Emergency Breathing System (CA-EBS)**

### **C.1 Target group for the FOET (with CA-EBS)**

This programme is designed to meet the further offshore safety and emergency response training requirements for personnel working in the offshore oil and gas industry who will be supplied with a compressed air emergency breathing system (CA-EBS) during offshore helicopter travel.

### **C.2 Delegate pre-requisites for the FOET (with CA-EBS)**

The FOET (with CA-EBS) is open to persons who have a valid (in-date) OPITO-approved BOSIET (with CA-EBS), BOSIET, TBOSIET, FOET (with CA-EBS), FOET or TFOET certificate.

Training providers must provide evidence that the pre-requisite requirements were met by the delegates, if requested by OPITO.



### **C.3 Physical and stressful demands of the FOET (with CA-EBS)**

Training and/or assessment activities contained within this Standard may include physically demanding and potentially stressful elements. All personnel who participate in such activities must be physically and mentally capable of participating fully.

Therefore, OPITO-approved training centres are required, as a minimum, to ensure that prior to participating in practical exercises the delegate either:

- (a) Possess a valid, current offshore medical certificate **or**
- (b) Possess an employing company approved medical certificate equivalent to an offshore medical certificate, **or**
- (c) Undergoes medical screening by completing an appropriate medical screening form provided by the OPITO-approved centre (a list of medical conditions which could be included in a medical screening form is available from OPITO).

The OPITO-approved Centre shall keep a record of the delegate's/candidate's declaration of fitness in accordance with their document control policy(s) or procedures.

This information, along with summary details of the type of physical activities the delegate/candidate will be asked to perform, will be given to delegates/candidates by the OPITO-approved Centre and, if applicable, to their sponsoring company as part of the joining instructions. The responsibility for declaring any current or pre-existing medical conditions that could have adverse effects to the individual's state of health while undertaking the training and/or assessment activities lies with the delegate/candidate and/or company sponsoring the delegate.

Where doubt exists regarding the fitness of any delegate/candidate, the OPITO-approved Centre should direct the individual to consult a medical officer familiar with the nature and extent of the training.

**Note: Practical exercises should be designed and delivered solely to meet this standard, and must not place on the delegates any physical or mental demands other than those required to meet the Standard.**

#### **C.4 Aims and objectives of the FOET (with CA-EBS)**

The aim of the FOET (with CA-EBS) is to provide the delegates with the opportunity to practise and demonstrate emergency response skills which are not possible to practise during drills, exercises and emergency training offshore.

The objectives of the FOET (with CA-EBS) are that delegates will be able to:

- (a) Demonstrate, in a simulated environment, that they can use the safety equipment and follow procedures in preparing for and during helicopter emergencies – with particular focus on escaping from a helicopter following ditching.
- (b) Demonstrate that they can use basic firefighting equipment effectively, and use self-rescue techniques in low visibility and completely obscured visibility situations e.g. smoke filled areas.
- (c) Demonstrate that they can perform basic first aid.

## C.5 Learning outcomes of the FOET (with CA-EBS)

The Delegate's learning outcomes for each module are set out below:

### MODULE 5 Helicopter Safety and Escape

To successfully complete this training, delegates must be able to **demonstrate**:

- (1) Donning of an aviation transit suit, an aviation lifejacket, compressed air emergency breathing system (CA-EBS) equipment and conducting integrity checks of the CA-EBS equipment, including buddy checks
- (2) Deploying (left and right hand) and breathing from CA-EBS equipment at atmospheric pressure in dry conditions
- (3) Actions to take in preparing for a helicopter emergency landing
- (4) Following instruction from the crew, location of CA-EBS equipment and evacuation from a helicopter using a nominated exit, following a controlled emergency descent to a dry landing (conducted in helicopter simulator at poolside on dry land)
- (5) Actions to be taken in preparing for an in-water ditching including location of exit, deploying and breathing from CA-EBS equipment at atmospheric pressure in dry conditions (conducted in helicopter simulator at poolside on dry land)
- (6) Dry evacuation, using a nominated exit, to an aviation life raft from a helicopter ditched on water (and, on instructions from the aircrew, operation of a push out window), assisting others where possible and carrying out initial actions on boarding the aviation life raft, to include: mooring lines, deploying the sea anchor, raising the canopy and raft maintenance\*
- (7) Escaping through a window opening which is underwater, from a partially submerged helicopter (without operation of a push out window)\*
- (8) Escaping through a window opening which is underwater, from a partially submerged helicopter (with operation of a push out window)\*
- (9) Escaping through a window opening which is underwater, from a capsized helicopter (without operation of a push out window)\*
- (10) Following escape from the helicopter (HUET), inflate lifejacket, deploy spray visor and carry out in-water procedures, to include swimming, getting into Heat Escape Lessening Position (HELP), towing, chain, huddle and circle\*
- (11) Boarding an aviation liferaft from the water\*
- (12) Being rescued by one of the recognised methods available offshore and survivor actions following rescue\*

**\*Note: CA-EBS equipment must not be worn during Learning Outcomes 6 thru 12**

## MODULE 6                    Firefighting and Self Rescue

To successfully complete this module, delegates must be able to **demonstrate**:

- (1) Correct use of appropriate hand held portable fire extinguishers and which ones to use for different classes of fires.
- (2) Self-rescue techniques with a smoke hood or partial blindfold from areas where delegate visibility is reduced.
- (3) Self-rescue techniques with a smoke hood or partial blindfold from areas where delegate visibility is completely obscured
- (4) Small group escape techniques with a smoke hood or partial blindfold from areas where delegate visibility is completely obscured

## MODULE 7                    Emergency First Aid

To successfully complete this module, delegates must be able to **demonstrate**:

- (1) Raising the alarm
- (2) \*Immediate first aid actions, to include industry recognised first aid practice \*\*

\*Immediate first aid actions - putting casualty in the recovery position: delegates must get instruction and demonstration **only** from instructors on putting a casualty into the recovery position but do not need to demonstrate this.

\*\* Industry recognised first aid practice – this may vary depending on first aid practice guidelines adopted in different countries/regions.

## C.6 Delegate Performance Assessment of the FOET (with CA-EBS)

Delegates will be assessed against the learning outcomes specified in [C.5](#) using direct observation.

## C.7 Duration and timing of the FOET (with CA-EBS)

The optimum 'contact time' for this training is seen as **8 hours**.

Where this training is part of a programme of longer duration the total contact time per day must not exceed 8 hours and the total training day must not exceed 10 hours. The total training day includes contact time, refreshment and meal breaks and travel between training sites where applicable.

Table of FOET Module/Element Timings

Module		Element		Expected (approximate) Duration (minutes)
	Course Introduction	C.8	Aim, learning outcomes, timetable, assessment methods and training staff roles	10
5	Helicopter Safety and Escape	5.1	Use of Compressed Air Breathing System (CA-EBS)	255
		5.2	Helicopter safety and escape techniques	
6	Firefighting and self-rescue	6.1	Firefighting and self-rescue techniques	155
7	Emergency First Aid	7.1	Emergency first aid techniques	60
<b>Total</b>				<b>480 mins (8hrs)</b>

The contact time\* is based on the maximum number of delegates/candidates undertaking the programme.

Where stated, individual module/unit/element timings that are specified within the standard must be adhered to.

The contact time must not exceed 8 hours in any one day and the \*\*total programme day must not exceed 10 hours.

Practical and theory sessions must contain adequate breaks for delegate welfare.

**\*Contact time** includes the following:

- (v) delegate/candidate enrolment and certification process
- (vi) delivery of the theoretical and practical training/assessment programme.

**\*\*The total programme day** includes: contact time, welfare breaks, meal breaks and where applicable, travel between sites.

## C.8 The FOET (with CA-EBS) Training Programme

The training programme outlined below will assist the delegates to meet the stated learning outcomes. The order in which elements of the training programme are delivered may vary. However, contents in Appendix 1 must be covered prior to course commencement

To make efficient use of time and ensure effective learning there should, wherever practicable, be an integration of the three phases of explanation, demonstration and practise. Full use should be made of visual / audio visual aids and course handout material.

Each module must be introduced by the training staff, and include:

- (a) **Aim** – The main purpose of the module
- (b) **Learning Outcomes** – What the delegates are expected to learn
- (c) **Timetable** – Training modules duration and timing
- (d) **Assessment** – how delegates will be assessed and what they will be assessed against
- (e) **Staff** - who will be delivering the training and roles of training support staff

The FOET Training course consists of the following modules and elements:

### **Module 5** Helicopter Safety and Escape

Element 5.1 Use of Compressed Air Breathing System (CA-EBS)

Element 5.2 Helicopter safety and escape techniques

### **Module 6** Firefighting and Self Rescue

Element 6.1 Basic firefighting and self-rescue techniques

### **Module 7** Emergency First Aid

Element 7.1 Emergency first aid techniques

## **MODULE 5 Helicopter Safety and Escape**

### **ELEMENT 5.1 Use of Compressed Air Breathing System (CA-EBS)**

Training staff to **explain**:

- 5.1.1 The principles of compressed air emergency breathing systems (CA-EBS)
- 5.1.2 The components and elements of the CA-EBS, including:
  - (a) Hose (if fitted)
  - (b) Mouthpiece
  - (c) Cylinder
  - (d) Demand Valve
  - (e) Pressure indicator
  - (f) On/Off ratchet/knob (if fitted)
  - (g) On/Off Status Indicator (if fitted)
  - (h) Purge button
  - (i) Nose clip (if fitted)
  - (j) Charging Port
- 5.1.3 The operation of the compressed air EBS equipment in conjunction with other survival equipment:
  - (a) Life jacket
  - (b) Survival suit (including importance of correctly sized suit)
  - (c) Personal Locator Beacon (PLB)
- 5.1.4 The hazards associated with compressed air EBS:
  - (a) Medical hazards associated with lung over-expansion injuries
  - (b) Gasp reflex associated with cold water entry shock
  - (c) Coughing
  - (d) Dislodged mouthpiece (accidental or intentional)
  - (e) Accidental or deliberate loss of air including purging and hazards of incorrect purging
  - (f) Running out of air

Training staff to **explain** and **demonstrate** and delegates to **practice**:

- 5.1.5 The pre-donning checks on the life jacket and compressed air EBS, including:
  - (a) Pressure indicator reading
  - (b) Appropriate on/off status indicator (if fitted)
  - (c) Ratchet knob on/off (if fitted)
- 5.1.6 How to don the life jacket complete with compressed air EBS:
  - (a) Ensuring life jacket waist belt is not twisted (if fitted)

- (b) Fastening of life jacket
- (c) Adjustment of waist belt to ensure correct fit
- (d) Engagement of crotch strap ensuring a correct fit and roll away and securing of excess webbing (if fitted)
- (e) Ensure CA-EBS mouthpiece is correctly fitted
- (f) Ensure CA-EBS hose is correctly fitted (where appropriate)

5.1.7 Deployment of CA-EBS, including:

- (a) One handed deployment of the mouthpiece and nose clip in accordance with manufacturers' guidelines
- (b) How to achieve a good seal around mouthpiece
- (c) How to purge water from the mouthpiece
- (d) How to recover a dislodged mouthpiece
- (e) Use of demand valve

## **ELEMENT 5.2 Practical helicopter escape techniques**

Following explanations and demonstrations by training staff: delegates to **practice** and **demonstrate**:

- 5.2.1 Donning of an aviation transit suit, an aviation lifejacket, compressed air emergency breathing system (CA-EBS) equipment and conducting integrity checks of the CA-EBS equipment, including buddy checks
- 5.2.2 Deploying (left and right hand) and breathing from CA-EBS equipment at atmospheric pressure in dry conditions
- 5.2.3 Actions to take in preparing for a helicopter emergency landing
- 5.2.4 Following instruction from the crew, location of CA-EBS equipment and evacuation from a helicopter using a nominated exit, following a controlled emergency descent to a dry landing (conducted in helicopter simulator at poolside on dry land)
- 5.2.5 Actions to be taken in preparing for an in-water ditching including location of exit, deploying and breathing from CA-EBS equipment at atmospheric pressure in dry conditions (conducted in helicopter simulator at poolside on dry land)
- 5.2.6 Dry evacuation, using a nominated exit, to an aviation life raft from a helicopter ditched on water (and, on instructions from the aircrew, operation of a push out window), assisting others where possible and carrying out initial actions on boarding the aviation life raft, to include: mooring lines, deploying the sea anchor, raising the canopy and raft maintenance\*
- 5.2.7 Escaping through a window opening which is underwater, from a partially submerged helicopter (without operation of a push out window)\*
- 5.2.8 Escaping through a window opening which is underwater, from a partially submerged helicopter (with operation of a push out window)\*
- 5.2.9 Escaping through a window opening which is underwater, from a capsized helicopter (without operation of a push out window)\*
- 5.2.10 Inflation of an aviation lifejacket, deployment of a spray visor and carrying out in-water procedures (including individual and group survival techniques) – swimming, HELP, towing, chain, huddle and circle\*
- 5.2.11 Boarding of an aviation liferaft from the water\*
- 5.2.12 Being rescued by one of the recognised methods available offshore\*



**\*Note: CA-EBS equipment must not be worn during exercises 5.2.6 thru 5.2.12**

## **MODULE 6      Firefighting and Self Rescue**

### **ELEMENT 6.1    Basic Firefighting and Self-Rescue Techniques**

Following explanations and demonstration by training staff: delegates to **practice** and **demonstrate**:

- 6.1.1 Raising the alarm on discovery of a fire
- 6.1.2 The operation of hand held portable fire extinguishers in extinguishing Class A or Class B fires. (see Note 2 below)
- 6.1.3 Self-rescue techniques with a smoke hood or partial blindfold from areas where delegate visibility is reduced
- 6.1.4 Self-rescue techniques with a smoke hood from areas where delegate visibility is completely obscured\*
- 6.1.5 Small group escape techniques with a smoke hood from areas where delegate visibility is completely obscured\*, concluding with a muster exercise

\*This may be achieved by conducting exercises in darkness or by using “blacked out” smoke hoods or partial blindfolds.

Note: Smoke hoods to be used in cosmetic smoke only.

#### **NOTES Module 6:**

- (1) The OPITO standard will be satisfied when each delegate practises the operation and use of each of the following types of fire extinguisher:
  - (a) Water or foam
  - (b) CO<sub>2</sub>
  - (c) Dry chemical
- (2) Although class A and B fuels must be used for demonstration fires by staff, [LPG](#) simulation may be used for delegate practise exercises.
- (3) Although not a requirement of the standard, delegates should be given the opportunity to operate a small bore hose reel and/or fire blanket if sufficient time is available.

## **MODULE 7      Emergency First Aid**

### **ELEMENT 7.1      Emergency First Aid Techniques**

*Note: The delivery of this module should concentrate on enhancing the learning gained during the previous BOSIET/FOET.*

Training staff to **explain**:

7.1.1 First aid arrangements

7.1.2 Types of injuries, to include:

- (a) Bleeding
- (b) Burns
- (c) Chemical contact

7.1.3 Prioritising Actions

7.1.4 Immediate first aid actions prior to the arrival of the medic/first-aider, to include:

- a) Assessing the situation – do not put yourself (or others) in danger.
- b) Making the area safe.
- c) Assess all casualties and attend to any **unconscious** casualties.
- d) Send for help as soon as possible.

Training staff to **explain** and **demonstrate**:

7.1.5 Raising the alarm.

7.1.6 Assessing the situation

7.1.7 Checking the area is safe

7.1.8 Checking airways, breathing and industry recognised first aid practice\*

7.1.9 Putting casualty in the recovery position.

Delegates to **practice** and **demonstrate**:

7.1.10 Raising the alarm.

7.1.11 Assessing the situation.

7.1.12 Checking area is safe.

7.1.13 Industry recognised first aid practice\*

\* Industry recognised first aid practice – this may vary depending on first aid practice guidelines adopted in different countries/regions.

## **SECTION D Resources for the BOSIET (with CA-EBS), HUET (with CA-EBS) and FOET (with CA-EBS)**

In order to ensure that a training programme can be delivered successfully it is essential that appropriately qualified and experienced people are there to deliver and support the programme and that the appropriate facilities and equipment are in place.

### **D.1 Staff**

**Training staff** must be:

- (a) Trained in instructional/lecture techniques and/or have proven instructing /teaching experience.
- (b) OPITO Centres must have an auditable training programme in place to ensure instructors keep up-to-date with relevant current offshore practices and changes. The programme must include at least two of the following: visits to offshore fixed or mobile installations, visits to heliports, visits to dry-docked rigs and meetings with relevant personnel in offshore oil and gas companies.

**Assessors** must hold an industry-recognised assessor's qualification.

**HUET Divers** must:

- (c) be in possession of a valid and appropriate Open Water SCUBA qualification, awarded by an independent recognised diving accreditation body.
- (d) have successfully completed the OPITO HUET Diver training including the examination (refer to HUET Diver Training Programme document for specific details)
- (e) be engaged in an ongoing further development and competence assessment programme which ensures that they are assessed as competent to carry out the activities required to carry out their job function on a regular basis including:
  - i. participation in emergency drills and exercises conducted in accordance with company procedures (as a minimum, annually).
  - ii. knowledge and understanding of current HUET equipment and current operating procedures in use by the Training Provider

**Crane/Hoist Operators** must:

- (f) have successfully completed Original Equipment Manufacturer (OEM) training or industry recognised training for the lifting operations of the HUET
- (g) have successfully completed OPITO HUET Diver theory training including the theory examination (refer to HUET Diver Training Programme document for specific details)
- (h) have successfully participated in and demonstrated competence in all modes of HUET operation (minimum of 10 individual HUET sessions as a trainee)

- HUET Operator under supervision) and participated in relevant HUET maintenance activities
- (i) have participated in all emergency drills for HUET exercises as per risk assessments (as a trainee HUET Operator under supervision)
  - (j) be formally appointed as a HUET Operator based on completion of requirements f-i above
  - (k) be engaged in an ongoing further development and competence assessment programme which ensures that they are assessed as competent to carry out the activities required to carry out their job function on a regular basis including:
    - i. participation in emergency drills and exercises conducted in accordance with company procedures (as a minimum, annually).
    - ii. knowledge and understanding of current HUET equipment and current operating procedures in use by the Training Provider

**Pool Safety Personnel** must:

- (l) Be trained in and possess sufficient and relevant experience in dealing with in-water emergencies
- (m) Be in possession of a valid nationally recognised Pool Safety Lifeguard qualification.

**Medical Emergency Response (MER) Staff**

Training Providers delivering BOSIET (with CA-EBS), HUET (with CA-EBS) and FOET (with CA-EBS) Standards must be able to ensure that they can meet clear and specific requirements relating to medical emergency response (MER) provision and that these requirements are exercised, recorded, maintained and audited.

Full details of the required MER requirements are detailed in the OPITO Medical Emergency Response Requirements. The medical emergency response requirements set out in this document is based on a tiered time-based response. The document details expectations on maximum response times, minimum equipment levels and access to specified medical personnel and facilities in an event of a medical emergency. It also identifies roles, designations, responsibilities and competence of medical emergency response staff.

**All staff** must have the appropriate documented competences to conduct/assist with the element of training being undertaken.

## D.2 Trainer/Delegate Ratio

- (1) The ratio shown for theory sessions indicates the maximum number of delegates attending the course.
- (2) Other ratios indicate the maximum number of delegates to be supervised by an instructor at any one time during each activity.
- (3) Swimmers, weak swimmers and non-swimmers must be clearly identified during all pool exercises through the use of different coloured helmets.

Unit	Session	Ratio
<b>Safety Induction</b>	Theory	1: 16
<b>Helicopter Escape</b>	Theory	1: 16
	Theory and Demonstration	1: 16
	Dry Helicopter Escape Trainer	1: 8
	Helicopter Underwater Escape Trainer (HUET) (in pool)	1: 4
	As a minimum the HUET team must comprise of the following: <ul style="list-style-type: none"> <li>• 1 x Lead Instructor</li> <li>• 1 x Crane/Hoist Operator/Dive Supervisor</li> <li>• 2 x OPITO HUET divers</li> <li>• Pool safety personnel</li> </ul> Note: A maximum of 2 designated weak/non-swimmer delegates are permitted for any HUET (in pool) exercise	
<b>Sea Survival</b>	Theory	1: 16
	TEMPSC (per craft) Theory and Demonstration	1: 8
	Lowering and Release	1: 16
	In-Water	1: 4
	As a minimum the Sea Survival team must comprise of the following: <ul style="list-style-type: none"> <li>• 1 Lead Instructor</li> <li>• 2 (in water) pool safety personnel</li> </ul>	
	Emergency first aid theory	1: 16
	Supervision of ABC practical	1: 4
<b>Firefighting and Self Rescue</b>	Theory	1: 16
	Extinguishers Theory and Demonstration	1: 16
	Practical Extinguishers	1: 4
<b>Practical self-rescue</b>	Group escape exercise	1: 4
	Self-rescue in cosmetic smoke	1: 4

### D.3 Facilities

It is important that the full range of facilities are made available at the training centre to ensure delegates get the most out of their training. The following facilities criteria must be adhered to:

**Administration arrangements** appropriate for enrolment and certification of delegates and all aspects of the delivery of training in accordance with this standard.

**Theory training area(s)** so designed to enable each delegate to view, hear and participate fully in the subject matter being taught.

**Practical training areas** so designed to enable each delegate to individually, or as part of a team, to view, hear and practise the following:

1. Dry evacuation into an aviation liferaft on water from a helicopter trainer.
2. Escape from a partially submerged helicopter trainer through an exit which is under water.
3. Escape from a capsized helicopter trainer and use of a lifejacket.
4. Evacuate from a helicopter trainer following an emergency dry landing.
5. Operation of emergency exits and push-out windows of a type currently found on helicopters operating offshore.
6. Donning of compressed air emergency breathing system equipment and an aviation lifejacket
7. Operation of an aviation liferaft.
8. The donning of a permanent buoyancy life jacket.
9. The use of a helicopter lifting device and winching to a simulated rescue aircraft.
10. The boarding of a marine life raft from the water
11. In-water procedures, including individual and group survival technique, followed by rescue by one of the recognised methods available offshore.
12. Mustering, boarding and strapping in as a TEMPSC passenger (the craft then to be lowered into water to float and be released).
13. The use of portable fire extinguishers on a range of fires of surface area 0.1 m<sup>2</sup> to 1.0 m<sup>2</sup> against the following:
  - a) Class A fire
  - b) Class B contained spill.
14. The donning and wearing of a smoke hood in an area which can be smoke logged using cosmetic smoke.
15. Dedicated concreted area with adequate drainage to allow the delivery of all firefighting exercises for 16 delegates, instructors and support staff.

#### **Medical Emergency Response (MER) Requirements**

Training Providers delivering BOSIET (with CA-EBS), HUET (with CA-EBS) and FOET (with CA-EBS) Standards must be able to ensure that they can meet clear and specific requirements relating to medical emergency response (MER) provision and that these requirements are exercised, recorded, maintained and audited.

Full details of the required MER requirements are specified in the [OPITO Medical Emergency Response Requirements](#). The medical emergency response requirements set

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out in this document is based on a tiered time-based response. The document details expectations on maximum response times, minimum equipment levels and access to specified medical personnel and facilities in an event of a medical emergency. It also identifies roles, designations, responsibilities and competence of medical emergency response staff.

The Training Provider must also establish and document clear communication guidelines between poolside and in-water personnel for all practical exercises and emergencies.

### **CA-EBS Cleaning Facilities**

The Training Centre must have stringent hygienic CA-EBS equipment cleaning facilities.

**All facilities must be maintained and where appropriate, inspected and tested in accordance with current standards/legislation and manufacturers' recommendations.**

**Risk assessments must be conducted and documented for all training facilities and equipment.**

### **Facilities Notes:**

A **fresh water pool** with appropriate water treatment facilities is required for conducting all HUET and in-water exercises.

## D.4 Equipment

The following equipment, of a type in use regionally on offshore oil and gas installations and helicopters involved in offshore operations, is required to meet the needs of the training programme.

1. Aviation and marine lifejackets
2. Cosmetic smoke generator
3. Compressed Air Emergency Breathing System (CA-EBS) Equipment or life jackets/transit suits with integrated CA-EBS.
4. O<sub>2</sub>
5. Fire blanket
6. First Aid Equipment
7. Fuels and props (Class A and B fires)
8. Helicopter rescue device (of a type used regionally offshore)
9. Helicopter Underwater Escape Trainer(s) c/w removable exits
10. Hose reel
11. Health and safety figures on accident statistics
12. Installation emergency organisation chart (examples)
13. Location aids suitable for training purposes (e.g. dummy radio beacons and pyrotechnics)
14. Mannequins and cleaning equipment
15. Marine liferaft and ancillary equipment
16. Permit to Work (examples)
17. Personal Protective Equipment (PPE)
18. Portable Extinguishers – water/foam, CO<sub>2</sub> and dry chemical
19. Rescue equipment
20. Aviation liferaft and ancillary equipment
21. Smoke hoods
22. Products on task-based risk assessment, lifting and mechanical handling, PRfS, and Permit to Work
23. STOP/START/[TOFS](#) information
24. Marine survival suit (also known as immersion suit or abandonment suit). This suit is insulated.
25. An aviation transit suit: to include actual transit suits used in region/area for helicopter transfers
26. Pool training suits
27. TEMPSC and ancillary equipment
28. One actual Tertiary Escape System and video/slide presentation of others
29. Torches
30. Video – Pyrotechnics
31. Video - Hypothermia
32. Winch for use during simulated helicopter rescue
33. Sufficient diving equipment for HUET safety divers
34. PLB Video – where applicable



## Compressed Air Emergency Breathing System

Note:

- (1) Particular attention must be paid to the hygienic maintenance of CA-EBS equipment. CA-EBS units (not cylinders) must be individually numbered to facilitate traceability.

## Aviation Transit Suits

1. Aviation transit suits for demonstration purposes must be of a type typically used in the region/area of operations.
2. Suits used throughout **pool exercises** (pool training suits) do not have to be of a type specified in the item above; they must however, as a minimum, conform to the following:
  - a) Be water-tight
  - b) Have a zip configuration for entry into the suit
  - c) Have latex or neoprene wrist and neck seals.

## TEMPSC Requirements

- (a) Davit arrangement, complete with rubber buffers to enable delegates to enter the TEMPSC without it moving.
- (b) Centrifugal brake arrangement to enable the TEMPSC to be lowered without power; activation of this system is undertaken from within the TEMPSC by the coxswain/instructor.
- (c) Electric winch for hoisting, complete with limit switches to prevent Davit/TEMPSC damage.

## TEMPSC Lowering Range

### Bund wall and pool training areas:

Minimum Keel-to-water height is **two** meters

Maximum Keel-to-water height is **three** meters

### Tidal areas

The TEMPSC lowering height to be a maximum of **three metres** above the highest recorded tidal mark.

**Note:** In both cases the water into which the TEMPSC is lowered must be a sufficient depth to enable the TEMPSC to float and to allow the hook(s) to open and allow release of the TEMPSC.

## HUET Requirements

Helicopter Underwater Escape Trainers (HUETs) used for OPITO training must meet the following criteria.

The HUET Trainer:

- (a) Must have at least four seats for delegates and sufficient space for minimum of one instructor
- (b) Must have a push-out window exit available for each delegate.
- (c) Must have push-out window exits of a similar size to those found on the common offshore helicopters.
- (d) Must be able to be lowered on to the surface of the water and then subsequently lowered below the water in an upright position.
- (e) Structure (with the seats) must be able to rotate a minimum of 180° in a controlled fashion.
- (f) Must have a means of stopping the rotation in an emergency i.e. a brake.
- (g) Must have the capability of being rapidly retrieved to the surface in an emergency and if necessary to the side of the pool with the delegates inside.
- (h) Must have realistic seating arrangement as found in offshore helicopters, and include seatbelt/harness fastenings and a system for releasing delegates in an emergency should the buckle fail to open.
- (i) Must have a nominated exit (hinged, sliding or jettisonable) with the operating mechanism of a type similar to that found on offshore helicopters.

**Note:** One HUET can be used for both wet and dry exercises. Alternatively, two helicopter trainers can be used.

**All equipment must be maintained, and where appropriate, inspected and tested in accordance with current standards/legislation, guidance and manufacturers recommendations.**

## SECTION E Administration and Certification

### E.1 Joining Instructions

All joining instructions must contain information which indicates that certain aspects of the course are of a physical nature and contain potentially stressful elements.

Prior to each course commencing, delegates must sign a declaration indicating they have read and understood a written statement regarding the physical and potentially stressful nature of the programme, and the need for delegates to be in good health.

### E.2 Periodicity

The maximum interval between the successful completion of BOSIET (with CA-EBS) training and subsequent completion of FOET (with CA-EBS) training is 4 years. The HUET (with CA-EBS) certificate is also valid for 4 years.

**Note:** Some individual companies require re-validation at intervals more frequent than that required by OPITO; in these instances it will be acceptable for training providers to omit or modify the expiry date to avoid confusion. However the validity period will remain as set by OPITO with regard to the central register and the industry as a whole.

### E.3 Certification

Training Centres are responsible for issuing a certificate direct to the delegate completing the programme and to the sponsoring company (when required). Each certificate must indicate that the delegate has been assessed against and met the learning outcomes and must contain the following:

- (a) Training Centre name
- (b) Full OPITO course title stating that it is OPITO-approved
- (c) OPITO registration code
- (d) Delegate's name
- (e) Course dates
- (f) Expiry date (Four years minus one day following the date that the delegate successfully completes the course)
- (g) Unique Certificate Number (UCN) – Refer to [OPITO UCN Guidance doc.](#) for details
- (h) Training Centre Signatory.

#### **E.4 Course Administration**

Each delegate attending any OPITO-approved programme must be registered with the Central Register (CR) operated by OPITO. Registration must be made by the training centre to OPITO within one week following the course.

OPITO confirms that information on the registration form will be contained in a computerised register which will be available to employers, prospective employers and training providers in the oil and gas industry to verify training records. At all times, use of this data will be strictly in accordance with principles laid down in data protection legislation.

## Glossary of Terms and Abbreviations

ABC	Airway Breathing and CPR
ALARP	As low as reasonably practicable
BOSIET	Basic Offshore Safety Induction and Emergency Training
BOP	Blowout Preventer
CO <sub>2</sub>	Carbon Dioxide
CPR	Cardiopulmonary Resuscitation
CR	Central Register
CA-EBS	Compressed Air Emergency Breathing System
FPSO	Floating Production Storage and Offloading
FOET	Further Offshore Emergency Training
FRC	Fast Rescue Craft
HELP	Heat Escape Lessening Position
HUET	Helicopter Underwater Escape Trainer
H <sub>2</sub> S	Hydrogen Sulphide
LPG	Liquid petroleum gas
MRRD	Mechanical Rescue and Recovery Device
MSDS	Material Safety Data Sheet
OIM	Offshore Installation Manager
PLB	Personal Locator Beacon
POB	Personnel on Board
PRfS	Personal Responsibility for Safety
PPE	Personal Protective Equipment
PTW	Permit to Work
SAR	Search and Rescue
SMS	Safety Management System
TEMPSC	Totally Enclosed Motor Propelled Survival Craft
TOFS	Time Out for Safety
UCN	Unique Certificate Number
UKCS	United Kingdom Continental Shelf

## Appendix 1 OPITO Information

The topics listed below are to be delivered as part of the introduction to this course and included in the lesson plans/instructor guides/exercise plans. Additional introduction topics must include as a minimum, training centre layout and alarms, emergency actions, first aid and domestic arrangements.

Mandatory OPITO Information:

- a) Medical Fitness
- b) Certification Periods
- c) CR/Vantage (provided by OPITO)
- d) OPITO Customer Service Statement (provided by OPITO)
- e) The roles of employers and training providers (provided by OPITO)
- f) What is OPITO's role in industry? (provided by OPITO)
- g) Current Global Network of training providers (provided by OPITO)
- h) Emergency Response Framework (provided by OPITO – applicable for ER Training Providers)
- i) OPITO DVD (*BOSIET/BOSIET(with CA-EBS)/TBOSIET only*) provided by OPITO