CAPP
CANADIAN ASSOCIATION OF PETROLEUM PRODUCERS

Helicopter Underwater Emergency Breathing Apparatus (HUEBA) Implementation Plan

Evaluation of HUEBA Training

HUEBA training will be evaluated by the CAPP Training and Qualifications Committee upon implementation and at a point in the future (not to exceed three years from implementation).

Exemption Process

The exemption procedure was reviewed by the CAPP Training and Qualifications Committee in relation specifically to HUEBA training. It was felt that the exemption process will be the same as the process used in relation to other required training as described within the CAPP *Standard Practice for the Training and Qualification of Personnel* (7.0 Exemption and Equivalency Procedures):

> Exemption Procedure (pg 7-1)
>
> *"Because of the intermittent nature of employment, course scheduling and other factors, it may not always be possible for an individual to fulfill all the qualification and training requirements set out in this document prior to traveling offshore. In such circumstances, an exemption may be granted on a case-by-case basis with the approval of the operator's senior onshore representative and the Offshore Installation Manager (OIM).*
>
> *For each individual granted an exemption, a Training and Qualification Exemption Notification Form (see Figure 7-1) must be completed by the operator and distributed in accordance with Section 'E' of the Form. Where an exemption relates to survival training, the helicopter contractor, or vessel master where the individual is to be transported via standby vessel, must also be notified. The energy authority will monitor all exemptions and will notify the operator in question regarding any specific or general problem or concern. The energy authority reserves the right to deny any exemption or to issue an order to an operator relating to exemptions if the process is abused."*

Medical Assessment

The same offshore medical that is currently required of all workforce personnel prior to training or travelling offshore is required prior to training on HUEBA in-water; no additions to this medical are required (CAPP *East Coast Medical Assessment for Fitness to Work Offshore)*

HUEBA Technical Standard

The UK Civil Aviation Authority technical standard for emergency breathing devices, which is currently under development, will be reviewed and considered for adoption as the HUEBA Technical Standard for Atlantic Canada.

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Communication Plan

The following information has been developed to assist companies to implement the HUEBA (note, the documents listed below will be compiled and provided cohesively to all operators with the intention of being provided to agencies and organizations with a responsibility or role in the HUEBA implementation – i.e. training organizations and helicopter companies):

HUEBA Stakeholder Communications Tree – TAB 1

The HUEBA Stakeholder Communications Tree identifies the roles and responsibilities in communicating information about HUEBA to stakeholders. It also identifies the stakeholders who must be notified and engaged in some aspect of HUEBA implementation.

Frequently Asked Questions (FAQ) – TAB 2

The Frequently Asked Questions (FAQ) provides answers to all foreseeable questions which may be posed by offshore workforce personnel. The purpose of the FAQ is to ensure that when heliport staff, trainers, industry representatives or others are communicating about the HUEBA the messages are readily available, clear and consistent.

1. What is a Helicopter Underwater Emergency Breathing Apparatus (HUEBA)?
2. There are different types of HUEBA in use worldwide (i.e. rebreather, hybrid-rebreather, compressed air system), which device will be employed in Atlantic Canada?
3. Is the HUEBA difficult to use?
4. Why is the device chosen for Atlantic Canada different from the types used in the North Sea
5. Why has industry introduced HUEBA?
6. Will it be mandatory to carry a HUEBA on all offshore helicopter flights?
7. What training will be available for offshore personnel, and when will it be available?

7.a) Why is the in-water training mandatory?
b) If mandatory, why is it not a requirement for in-water training until October 1?

8. Are there any risks arising from the use of HUEBA in the training?
9. Why will the HUEBA not be used in the HUET (helicopter underwater egress training) component of the basic safety training?
10. What is the medical risk?
11. Is additional medical approval required to participate in HUEBA training?
12. What is the impact to the suit of adding the HUEBA device?
13. Who is responsible for the maintenance of the HUEBA and what is the process?
14. How will the device be maintained to ensure proper hygiene?
15. What is the capacity of the HUEBA? (how much air/time)
16. Is it safe to be carrying the HUEBA on my suit while travelling in a helicopter?

HUEBA Overview and Implementation Presentation (Management) – TAB 3

The HUEBA Overview and Implementation Presentation (Management) is designed to provide to management or stakeholders (such as regulators) the essential information regarding HUEBA. The presentation includes information on the device, the process undertaken to choose and define implementation requirements, the implementation process, training, Transport Canada

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feedback regarding the transport of HUEBA, communication mechanisms, heliport process before and after implementation, review of the frequently asked questions, etc.

HUEBA Overview and Implementation Presentation (Offshore Personnel) – TAB 4

The HUEBA Overview and Implementation Presentation (Offshore Personnel) provides to employees the essential information regarding HUEBA. Detailed information on the use of HUEBA is provided in the HUEBA training module.

Posters and Seat Pocket Card – TAB 5

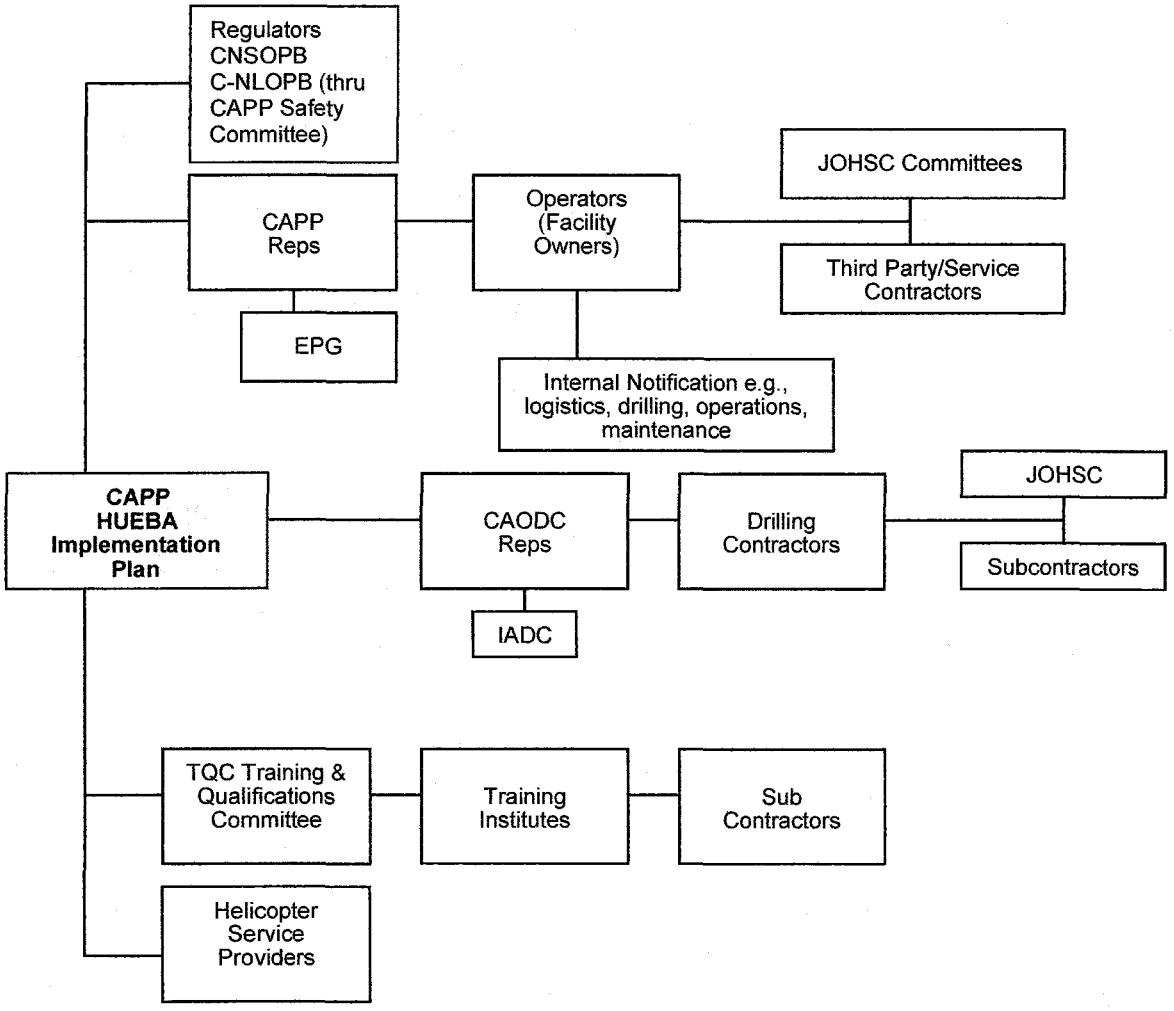
The following tools have also been prepared for HUEBA:

- a HUEBA reference card for helicopter seat pocket which depicts pictorially and with text the location and use of the device
- a HUEBA poster to be posted at the heliport which depicts pictorially information specific to HUEBA (including the gauge and other pre-flight check related information)

Tab 1

HUEBA TF – Implementation Plan

Communications Tree



Tab 2

Helicopter Underwater Emergency Breathing Apparatus (HUEBA) Frequently Asked Questions

1. **What is a Helicopter Underwater Emergency Breathing Apparatus (HUEBA)?**

   A HUEBA is a safety device designed to provide the user with an additional capacity of breathable compressed air while underwater so that he or she has more time to escape from a partially or totally submerged helicopter.

2. **There are different types of HUEBA in use worldwide (i.e. rebreather, hybrid-rebreather, compressed air system), which device will be employed in Atlantic Canada?**

   A compressed air system, similar to a SCUBA (self-contained underwater breathing apparatus), has been chosen for use in Atlantic Canada. This is a system that has been in use for many years and has been proven successful in emergency situations.

3. **Is the HUEBA difficult to use?**

   No. The device will be integrated into the existing helicopter flight suits, is easy to access and is activated by breathing. Training will be provided.

4. **Why is the device chosen for Atlantic Canada different from the types used in the North Sea?**

   The offshore petroleum industry and the Offshore Petroleum Boards in Nova Scotia and Newfoundland & Labrador undertook an extensive review of the types of HUEBA in use in other jurisdictions. Ease of training, ease of use, the ability to deploy before or after water submersion, and compatibility with the existing suits were deemed to be key features of the compressed air device that made it the most suitable device for use in Atlantic Canada.

5. **Why has industry introduced HUEBA?**

   Safety is the industry's top priority. In order to ensure that the best possible safety practices and programs are implemented industry continuously looks for new ways to improve these processes, including those related to helicopter travel. HUEBA systems have been proven effective in emergency situations and adding this device to the safety gear carried by the workforce travelling by helicopter will further enhance probability of survival in the event of a helicopter ditching.

6. **Will it be mandatory to carry a HUEBA on all offshore helicopter flights?**

   Yes. The HUEBA device will be integrated into the existing flight suits and is a mandatory component of the survival gear carried by all offshore workforce personnel during helicopter flights.

Helicopter Underwater Emergency Breathing Apparatus (HUEBA) Frequently Asked Questions

7. What training will be available for offshore personnel, and when will it be available?

For the implementation period (based upon rotation schedule in NL and NS) there will be a trainer at check-in for all flights to demonstrate the use of HUEBA and answer any questions workforce personnel may have. In addition, a segment outlining the use of HUEBA has been added to all pre-flight safety videos. In-water training for workforce personnel will commence in May and progress through October. By October, all regular Rota workforce personnel will have received in-water training. Commencing in May all scheduled BST, BST-R and OSI courses will have the HUEBA component included.

HUEBA training will be included in safety training courses required of offshore workforce personnel. The courses that will include this module are: Basic Survival Training, Basic Survival Training – Recurrent, Offshore Survival Introduction and Offshore Helicopter Survival. Also the HUEBA training module will continue to be available as a standalone course.

HUEBA training will consist of familiarization with the device in the classroom and practical exercises that will occur in the pool at surface. Training competencies will include familiarization with the components of the device, accessing the device on the suit, purging the regulator, and breathing from the device in and out of the water. Determining competency in the HUEBA component will be similar to other aspects of the safety courses and will be managed by the training organizations. The addition of the HUEBA component will not change the current duration of these courses.

7.a) Why is the in-water training mandatory?

The training that you will receive at the heliports prior to flights with the HUEBA (demonstration, video & practice deploying in air) is designed to provide an overview of compressed air, appropriate techniques for use of the device and steps for deploying the device in an emergency scenario. The in-water training that you will receive at training establishments will provide more in-depth discussion about using compressed air and allow you to practice the techniques in the pool.

7.b) If mandatory why is it not a requirement for in-water training until October 1?

The implementation of any new device requires a phase-in period. Operators have devised a training plan that will ensure that the regular workforce is trained in-water within a few months of implementation, after this phase-in period it will be a requirement to have had in-water training.

8. Are there any risks arising from the use of HUEBA in the training?

The risk associated with the use of the HUEBA in the manner described above (question 7) is as low as reasonably practical (ALARP).

Helicopter Underwater Emergency Breathing Apparatus (HUEBA) Frequently Asked Questions

9. Why will the HUEBA not be used in the HUET (helicopter underwater egress training) component of the basic safety training?

Medical advice indicates that risk of training to a depth of one meter is near zero. The risk in water to a depth of HUET training (1.8 metres) is possible but very unlikely. Thus, by not using the HUEBA in the HUET any potential risk is decreased.

Industry operators will continue to train employees to breath-hold during HUET to ensure the workforce is trained to respond to any possible emergency egress scenario.

10. What is the medical risk?

A detailed explanation will be provided during training.

11. Is additional medical approval required to participate in HUEBA training?

No. The medical required for all offshore work is sufficient to participate in HUEBA training.

12. What is the impact to the suit of adding the HUEBA device?

The HUEBA is integrated into the suit and tested similar to the PLB (personal locator beacon). The suit, with the HUEBA installed, has received Transport Canada Aviation approval. The way the HUEBA is mounted on the suit is designed to not pose a snagging hazard or otherwise impede egress from a harness/seat belt or the helicopter.

13. Who is responsible for the maintenance of the HUEBA and what is the process?

Maintenance of the HUEBA will conform to governing guidelines and standards. This will include annual checks and maintenance conducted by the approved service provider and pre-flight checks conducted by designated trained individuals onshore and offshore.

14. How will the device be maintained to ensure proper hygiene?

Proper hygiene processes have been developed and implemented at all locations. The device should have an intact hygiene seal. If not, notify heli-admin or heliport personnel.

15. What is the capacity of the HUEBA? (how much air/time)

The HUEBA in use in Atlantic Canada is an Aqualung device with a capacity of 1.5 cubic feet (42.5 liters) of air at 3000 psi. The amount of air available on deployment is dependent upon a number of factors, including characteristics of the individual using the device, depth, breathing rate, etc.

More detailed information will be provided during training.

Helicopter Underwater Emergency Breathing Apparatus (HUEBA) Frequently Asked Questions

16. Is it safe to be carrying the HUEBA on my suit while travelling in a helicopter?

Yes. The HUEBA canister is filled to 3000 psi though is designed to withstand internal pressure of up to 5000 psi (a 60% increase). As the pressure changes from the altitude change of the helicopter (e.g. 11.2% decrease in atmospheric pressure during a helicopter ascent to 1000m), the HUEBA is able to accommodate the small change in internal pressure as a result. Further, the HUEBA undergo regular maintenance checks to detect any structural issues with the canister. An analogy is the compressed air canisters that are on the helicopter to automatically inflate life rafts.