


January 21, 2013

Mr. Daniel Chicoyne
Chief Safety Officer
Canada-Newfoundland and Labrador Offshore
Petroleum Board
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Suncor: PES-CNO-TER-0406-2308
Husky: HUS-CPB-AR-LTR-00088
Hibernia: 970.30

Dear Mr. Chicoyne;


Re: Level of Service – First Response Helicopters

With reference to C-NLOPB correspondence dated October 30, 2012 regarding the above noted subject.

The report prepared by Peter McKeage was provided to Cougar Helicopters for review and comment. Subsequently, meetings were conducted between the Operators and Cougar to discuss the report and agree actions where appropriate.

Please see the attached document prepared by Cougar in response to the C-NLOPB report. This document includes details of Cougar's current status as well as actions taken as result of the opportunities identified in the C-NLOPB report.

Regards,



Sandy Martin



Jamie Long



Malcolm McLean

Attachment

/lf



Level of Service Requirements for First Response Helicopters

Ref: CNLOPB Report, October, 2012

January 15, 2013

Dear Sir,

As requested by Customer and in response to CNLOPB's Level of Service Requirements for First Response Helicopters report dated October, 2012, please review the following documentation and advise if further information is required.

This document from Cougar Helicopters Inc. serves as a gap analysis to the level of service requirements identified by the CNLOPB working group. The requirements have been measured against Cougar's present level of service capabilities to ensure proposed compliance has been met, exceeded or additional actions are needed to meet requirements in-line with the reports guidance as prescribed. Cougar understands that the equipment proposed by the working group is proactive assistance to our operations and likewise, any items that we did not agree with are explained within the document.

The gap analysis gauged the following requirements:

Equipment:

- a. Rescue Basket
- b. Horse Collar Device (Rescue Strop)
- c. Stokes Litter/Guideline Hoisting
- d. Medical Kits
- e. Casualty Bags/Heat Blankets
- f. Oxygen
- g. Compressed Breathing Apparatus - CABA

Capabilities:

- h. Hoist from water/life raft/supply vessel
- i. SKAD kits
- j. Night Vision Goggles
- k. Training Qualifications – Rescue Specialists - Rescue Swimming
- l. Training Qualifications – Rescue Specialists Medical Aid
- m. Training Qualifications – Rescue Specialists Maintenance of Rescue Equipment

Level of Service GAP Analysis

Green - "limited or no action required" **Red** - "process / procedural action required"

Item	Level of Service Requirement	CHI Present Level of Service	Action to Meet Requirement
<i>EQUIPMENT</i>			
A.	Rescue Basket	Rescue Basket in place and is the primary rescue apparatus for water rescue. See detailed information below - pg 3.	No action required. Current model meets recommendation.
B.	Horse Collar – Should be considered an essential piece of equipment for all first response helicopters.	Horse Collar – Rescue Strop is in place and remains an essential rescue device within Cougar operations. See detailed information below - pg 4.	No action required. Current model meets recommendation.
C.	Stokes Litter / Guideline Hoisting – Should be considered an essential capability of the first response helicopter and crew.	Medevac II litter is in place. It is a 1-piece stokes litter constructed of 304 stainless steel which exceeds 2,500 lb Load Test requirements for Mil-Spec stretchers. Guideline is in place. See information below – pg 6.	No action required. Current models of Litter and Guideline meets recommendation.
D.	Medical Kits – Newer, more sophisticated lightweight medical kits should be considered a minimum.	In addition to Penetration kits mentioned by the working group, Cougar also utilizes a larger Supplementary medical kit for the care of many casualties. See detailed information below – pg 7.	Two 2ndLine light weight medical packs recommended by the working group are on order. Care for up to 21 casualties each.
E.	Casualty Bags / Heat Blankets – Should be available for up to 21 survivors.	At present, Cougar SAR operations has 7 casualty bags, one thermal casualty bad and 15 wool blankets. See detailed information below - pg 8.	40 "Ready Heat" blankets recommended by the working group are on order.

F.	Oxygen – Lighter, more efficient oxygen cylinders should be available for use and considered part of the minimum equipment list.	Cougar utilizes aluminum D and E size cylinders. Although lighter than steel cylinders there are more efficient and lighter models now available on the market that are generally half the weight of present in-use models. See detailed information below – pg 8.	Two “DD” Ferno-Can lightweight cylinders as recommended by the working group are on order.
G.	Compressed Air Breathing Device (CABA) – Considered a minimum equipment requirement by the working group.	Divator Lite CABA Units for surface swimming/rescue recommended by the working group were researched and found not suitable for Cougar Rescue operations. Detailed information below – pg 8.	The Divator CABA unit was researched and found to be too heavy and cumbersome an application for surface rescues that pose a great deal of swimming agility that can be more effectively performed with the use of a quality snorkel. Potential of raft damage or puncture, limited air supply and ineffective double lift hoisting hazards also deemed the unit not acceptable.

A. Rescue Basket – Currently utilized in Cougar SAR Program

Meets working group recommendation

Collapsible Rescue Basket (2 - Person)



The Collapsible Rescue Basket combines the compact stow ability of the rescue net systems with the ruggedness, rigidity and safety of the field proven tubular frame rescue basket. The design features a 55% reduced stowage volume compared to the rigid style basket. This is intended to permit operators of smaller helicopters to carry the rescue device full time. Additionally the basket features a more open internal volume, able to fit two average adults. The ability to winch two victims during a single hoist evolution will speed the recovery and reduce the time at scene for multi-victim rescues. The bail assemblies fold into the rescue basket, and each side collapses for compact stowage.

- a. The basket is easily and quickly erected by simply lifting the bails and top rail assembly up, and then rotating the side supports down.
- b. Supports are secured in place by simple spring locks, and provide a rigid structure that aids handling and entry into the basket.
- c. A 1/4" stainless steel cable serves as the bail hinge point and provides the structural integrity of the bail assembly.
- d. This hinge design is field proven and has been in service for nearly 20 years on LSC's rigid #499 basket with no failures. Frame members are constructed of TIG welded stainless steel and the sides are 1/2" nylon webbing sewn into a net form.
- e. The stainless steel and synthetic components require minimal maintenance and provide extended service life. A semi-rigid, plastic net liner with 1" openings encloses the bottom of the basket.
- f. Inherent flotation provides positive self righting and reserve buoyancy.
- g. Float covers are printed with safety pictorials and have high intensity retro reflective markings. A heavy-duty stowage case constructed of 1050 denier ballistics nylon and tie-strap are included with the basket.

B. Horse Collar Rescue Device - Currently utilized in Cougar SAR Program

Meets working group recommendation

LSC Quick Strop





Description

Originally designed for the US Coast Guard, the LSC Quick Strop is now available to all rescue activities. Constructed of MIL-SPEC webbing and stainless steel hardware, the Quick Strop provides a quick, safe means of hoisting Personnel and casualties. The Strop can be placed under the arms, around the back, or over the head of the survivor in one quick motion to prevent the survivor from slipping out, a slide buckle is slid down the Strop and attached to an adjustable crotch safety strap which is stored in a zipper pocket on the rear of the Strop.

Approved for use by the US Coast Guard.

Product Specifications

General

Color: International orange cover with black webbing.

Weight: 2.54 lbs.

Inspections: Visual prior to each use.

Extended load test (v-ring to v-ring) at 600 lbs every 6 months.

Cleaning: Fresh water rinse with mild detergent.

Materials

Fabric Cover: 420 denier Nylon.

Pad: 7/16" closed-cell foam.

(Load Bearing) Type 10 Mil-Spec Nylon Webbing (Breaking Limit 10000 lbs) with TEX 210 Bonded Nylon Thread (Stitch Pattern Breaking Limit 5000 lbs)

Crotch Strap: Type 8 Mil-Spec Nylon Webbing (Breaking Limit 3400 lbs).

Type 13 Mil-Spec Nylon Webbing (Breaking Limit 6000 lbs).

Threads: TEX 45 Bonded Nylon.

Zipper: YKK corrosion resistant Vislon zipper and slider.

Snap Hook: Wichard Stainless Steel Snap Hook, 3-5/32" (Breaking Limit 3750 lbs).

Lifting Eyes: LSC #384 V-Ring with Box, Stainless Steel (Breaking Limit 5200 lbs).

Quick Adjustor: LSC #400 1-3/4" Adaptor Slide, Stainless Steel.

Strap Adjustor: LSC #362 1-3/4" Slide Bar Adjustor, Stainless Steel.

C. Medevac II Litter (Stokes) - Currently utilized in Cougar SAR Program

Meets working group recommendation



Overview

The Medevac II is a 1-piece stokes litter constructed of 304 stainless steel and then powder coated a light gray for a long lasting finish. Exceeds 2,500 lb Load Test requirements for Mil-Spec stretchers.

Description

The Medevac II™ series of litters are the most widely used helicopter rescue litters in the world. Currently in use with all branches of the US Military, the Japanese Self Defense Force, Canadian rescue organizations, Royal Australian Army, and are standard equipment aboard all US Coast Guard helicopters and rescue boats. The Medevac II is modern Stokes-type litters constructed with the marine environment in mind.

The Medevac II litters are constructed of 304 stainless steel and then powder coated a light gray for a long lasting finish.

The tubing used for the frame of these litters is 30% thicker than that used on MIL-SPEC litters. Included are 5 color-coded patient restraint straps with double locking Quick Release Safety Buckles. The troublesome wood rack used on the MIL-SPEC type Stokes litter has been replaced with stainless steel slats that run the full length of the litter. A smooth, plastic netting (with 1/2" openings) is used in place of the chicken wire liner. Optional flotation kits are available for each litter.

Guideline: Currently utilized in Cougar SAR Program

Meets working group recommendation

70 meter Mammut Galaxy 10mm Duodess Dry Rope, Quick Link Karabine and Dog Snap - live personnel breakaway link.



D. Medical Kits - Currently utilized in Cougar SAR Program (Fig.1)

Working group recommendation followed-up with the purchase of two 2ndLine packs. (Fig. 2)

(Fig.1)



(Fig. 2)



In addition to the two Penetration medical kits identified by the working group, Rescue Specialists also utilize two Supplementary medical kits. These kits are reliable units that hold a quantity of supplies to effectively work on many patients.

However, they are heavy and value will now be added by sourcing the lightweight kits (2ndLine lightweight packs) mentioned by the working group in the report. Two 2ndLine packs on order presently.

E. Casualty Bags / Heat Blankets - Currently utilized in Cougar SAR Program

Fourteen 3m Thinsulate
Sleeping Bags



Five Casualty
Bags



10 Emergency First Aid
Wool Blankets



Cougar possesses 29 bags / blankets for emergency purposes at present of various models. Ideally, the present stock should be of uniform demeanor, capable of delivering heat properties in a rapid fashion and be lightweight.

Working group recommendation followed-up with the purchase of 40 “Ready Heat” blankets.

The “Ready Heat” blanket prescribed by the working group contains all the properties listed above and is presently on order as a proactive replacement of current wool blankets given it’s light weight and the requirement to be utilized in a uniform format.

F. Oxygen - Currently utilized in Cougar SAR Program

Presently Cougar Rescue Specialist utilize aluminum oxygen cylinders and while lighter than steel cylinders, there are models now available that are half the weight than current model used.

Present “D” model cylinders – 8.6 lbs Ferno Lightweight “D” model – 3.6 lbs.

Working group recommendation followed-up with the purchase of the Ferno Can lightweight DD cylinders.

G. Compressed Air Breathing Apparatus (CABA) – Deemed unsuitable for SAR operations.

Presently, Cougar Rescue Specialists utilize snorkels to actively assist survivors in a high sea state environment.

There is no requirement for CABA within Cougar SAR operations at present. The Divator Lite recommended by the working group was researched and deemed inappropriate and highly cumbersome for surface swimming rescues, poses a threat to puncturing a liferaft and is ineffective for double hoist rescue operations. It also was measured unsuitable due to minimal air supply during demanding surface rescue swimming operations.

Level of Service GAP Analysis

Green - "limited or no action required" **Red** - "process / procedural action required"

Item	Level of Service Requirement	CHI Present Level of Service	Action to Meet Requirement
Capabilities			
H.	Hoist from water, liferaft and supply vessel – Number of training hours to maintain proficiency in these skill sets should be considered a minimum.	Cougar actively trains in water, liferaft and supply vessel hoisting operations and remains proficient at all times. 60 hrs training allotted. See detailed information below- pg 10.	No action required. Current training meets recommendation.
I.	SKAD Kits – Three such kits should be a minimum to maintain this capability.	Cougar SAR possesses 4 complete SKAD Kits at present. See detailed information below- pg 11.	No action required. Current number of SKAD kits meet recommendation.
J.	Night Vision Goggles - Required training hours needed to maintain NVG proficiency should be considered a minimum.	NVG's have been procured, training is on-going. Discussion with customer regarding training hours required has been completed. See detailed information below – pg 11.	No action required. Current training meets recommendation.
K.	Training Qualifications – Rescue Specialists - Rescue Swimming. Certification should be PADI/NAUI advanced diver level or equivalent.	Rescue Specialists do not require CABA qualifications. In-house swim capability testing utilized presently which meets or exceeds USCG requirements. See detailed information below – pg 12.	No action required. Current swimming capability meets recommendation.

L.	Training Qualifications – Rescue Specialists – Medical Aid: Rescue Specialists be certified to AMFR Level 2 or higher.	100% of Rescue Specialists in the Rescueman capacity are certified AMFR 2 or higher. See detailed information below – pg 13.	No action required. Current medical qualifications meet recommendation.
M.	Training Qualifications – Rescue Specialists – Maintenance of Rescue Equipment	Currently accomplished by members of the crew. Additional position is within the Safety department that will augment assistance to SAR operations. See info – pg 13.	No action required. Current handling of equipment meets recommendation.

H. Hoist from water, liferaft and supply vessel: **Current training meets the working group’s recommendation.**

Cougar SAR training encompasses all areas of hoisting from water, liferafts and supply vessels given the 60 hr training allotment provided on a monthly basis. The working group expresses that suitable hours need to be provided by the operators to provide proficiency in this perishable skillset.

It is *extremely important* that this also include *appropriate crewing, and training assets* for such evolutions as well. It is standard within the RCAF, USCG, Danish Air Force and other SAR providers with equivalent capabilities that the crew complement is two pilots, one Hoist Operator and two Rescue Specialists.

The reasons for this crewing level are numerous; the handling of a loaded (patient on board) litter or basket is difficult at best with one crewman, having one on the deck to manage a guideline and one on board to assist the hoist operator in securing the device and patient has been proven to be the safest method. The other facet of this is the availability of training assets.

Vessels have to be made available both day and night for training. Also, Cougar is liaising with the Canadian Coast Guard (CCG) to finalize an MOU with them to allow training with regular Coast Guard Vessels and the Auxiliary Coast Guard.

I. SKAD Kits - Current SKAD Kits meet the working group's recommendation.

Helicopter Survival Rescue Services – Survival Kit Air Droppable



Cougar SAR Operations have 4 complete SKAD kits at present. Two kits are the model above while the third and fourth kit are the improved model called HARK (Helicopter Aerial Rescue Kit). Cougar SAR will be moving towards replacing the present SKAD Kits and utilizing HARK for future operations. Timeline undetermined at present, but very important a uniform platform is achieved.

J. Night Vision Goggles - Current NVG training meets the working group's recommendation.

NVG training is on-going. The NVGs have been procured, the trainers trained (as well as four pilots trained in basic NVG's) and the aircraft permit has been received. Once the training is complete (approximately March '13), the crews will require three night circuits per 90 day period. This requires approximately 4 hrs per 90 day period, for every two crewmembers.



The ANVIS is a helmet mounted passive binocular system that provides improved situational awareness for air crews at night. The system amplifies ambient light from sources such as the moon, stars, and skyglow, so the viewed scene becomes clearly visible to the operator.

Features on the ANVIS 9 are as follows:

1. Powered by AA size batteries or on-board aircraft power converter,
2. Helmet mounted (Gentex, Gallet, Alpha) or handheld with clip-on power pack,
3. A light emitting diode (LED) on the visor mount blinks if the battery voltage drops below threshold values,
4. Adjusts for eye span, vertical distance, tilt, eye relief, diopter setting and objective focus,
5. Binocular may be flipped up and stored away from the eyes in an emergency.

K. Rescue Specialists - Rescue Swimming - **Current Rescue Specialist swimming ability meets or exceeds the Coast Guard criteria which is in-line with the working group's recommendation.**

To be certified as an advanced CABA diver does not necessarily mean that an individual's swimming abilities are that of a Rescue Swimmer. In fact, a very basic swimmer can accomplish a divers license to the advanced level.

Rescue Specialists are tested on their swimming abilities as per the below Swim Test criteria:

RESCUE SPECIALIST SWIMMING FITNESS & CAPABILITIES TEST

Swim Evaluation/test:	39<	40>
Distance swim (any stroke, no stopping, no time limit)	500m	400m
Victim tow	75m	50m
Underwater swim (must remain under the surface)	25m	20m
Underwater breath hold (timed)	60sec	45sec
Simulated free water entry	4m ht	4m ht
Tread water (without floatation)	30min	25min

Initial swim evaluation will be conducted without any aids. Subsequent swim evaluations/tests will be conducted in typical rescue man equipment.

L. Training Qualifications – Rescue Specialists, Medical Aid - Current medical qualifications meet the working group’s recommendation.

100% of Rescue Specialists in the Rescueman capacity are certified AMFR 2 or higher.

An Advanced Medical Skill Program is set to start in 2013 that will see enhanced protocols and treatment capabilities provided to our Rescue Specialists that will surpass the recommendation above.

The fundamental attribute this training will provide includes Intravenous Therapy, a vital component in reducing the effects from hypovolemic, neurogenic and cardiogenic shock.

It is also very important to establish an IV route prior to handing the patient over to a higher medical authority, this saving valuable time and providing a medicinal and fluid replacement route of entry in advance. The protocols will also allow for the administration of pain relief drugs for rapid transit of patients in the field.

M. Training Qualifications – Rescue Specialists, Maintenance of Rescue Equipment

Current equipment maintenance program meets the working group’s recommendation.

At present, the crew members are conducting tracking, certifications and basic maintenance on lifesaving equipment within the SAR division.

To effectively manage the survival equipment, PPE and special apparatuses, a Rescue Specialist on each rotating shift is responsible for the care and safe working operation of the SAR equipment. Additionally, Safety Equipment Coordinator position within the company lends support to the SAR Division.

It is crucial to ensure lifesaving equipment is current, available and in pristine working condition at all times.



Summary:

In conclusion, and as seen throughout this document, Cougar Helicopters Inc. currently meets or exceeds the levels of service specified in the original report developed by the CNLOPB's working group.

There are three areas identified on page 2 of this report that meet the requirement but as a proactive measure has been ordered to enhance the present level of service.

D. Medical Kits - 2ndLine light weight packs – Ordered.

E. Casualty bags / Heat Blankets - "Ready Heat" blankets – Ordered.

F. Oxygen – Lighter, more efficient oxygen cylinders - Ferno-Can lightweight cylinders – Ordered.

In addition, the position name "Rescueman" the working group identified in the report has been evaluated for change. An initiative is underway at present to only utilize titles of "Rescue Specialist" and "Hoist Operator". This change of position titles to occur in 2013.

Cougar would like to take this opportunity to thank the CNLOPB and its collective working group for the focus garnished not only on our First Response Level of Service, but in particular Search and Rescue as a whole.

If there are any questions, please feel free to contact me directly at the number below.

Thank you,



Rick Banks

SAR Program Manager

Cougar Helicopters Inc.

