OFFSHORE HELICOPTER SAFETY INQUIRY

WRITTEN SUBMISSIONS FOR

COUGAR HELICOPTERS INC.

(A VIH AVIATION GROUP COMPANY)

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July 30, 2010

PREAMBLE

In addition to its other operations, Cougar Helicopters Inc. ("Cougar") operates within the offshore oil and gas support market and, pursuant to certain Helicopter support contracts, provides helicopter transportation services including passenger movement to various oil company offshore operations from its St. John's base.

The tragic accident on 12 March 2009 involving the loss of Cougar's Flight 491 has profoundly impacted the lives of the families of the Cougar pilots and the passengers who perished that day, as well, the life of Robert Decker, the sole survivor, and his family. To all those so deeply affected, including members of the Cougar family, Cougar management again extend their heartfelt condolences and sympathies.

Cougar appreciates the resilience and strength of spirit shown by all who continue to travel with us to the Newfoundland and Labrador offshore. Cougar reaffirms its unwavering commitment to continue to exercise the greatest diligence in matters affecting the safety of our pilots and passengers.

Cougar has welcomed the efforts of the Offshore Helicopter Safety Inquiry and has endeavored to fully cooperate with and assist the Inquiry Commissioner and officials and to advance the important mandate of the Inquiry.

Cougar's personnel have already presented extensive oral and documentary evidence to the Inquiry in connection with its flight operations including those associated with its maintenance, dispatch, and passenger movement activities and most particularly, a thorough presentation of Cougar's Safety Management System and related risk management tools.

Cougar will present written submissions to only those issues enumerated by the Commission of Inquiry which directly involve with the role of Cougar in the offshore oil industry. Cougar reserves the opportunity to present further submissions during the oral

submissions portion of the inquiry process, particularly with respect to any concerns which may be raised in the written submissions of the other parties.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #1

Issue:

SHOULD THERE BE A DEGREE OF SEPARATION WITHIN THE C-NLOPB BETWEEN OFFSHORE HELICOPTER REGULATION AND OTHER OFFSHORE INDUSTRY REGULATION?

Cougar Submission to Issue #1

Helicopter operations within Canada including those offshore, fall under the jurisdiction of Transport Canada. Cougar would respectfully caution against the creation of a second or parallel helicopter operations regulatory regime, particularly if the additional oversight were to be undertaken without the same level of knowledge, training and expertise as expected from Transport Canada aviation safety officials.

Cougar respectfully submits that the appropriate role of C-NLOPB in respect of helicopter crew and passenger safety lies in its assessment of helicopter safety requirements directly and specifically related to offshore oil company passenger training and appropriate personal protective equipment for offshore oil workers.

The role of C-NLOPB would, in the opinion of Cougar, be best achieved through appropriate dialogue and exchange between C-NLOPB and Transport Canada. Cougar does not envisage that such role on the part of C-NLOPB would require regulatory separation from the C-NLOPB's other roles and responsibilities.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #2

Issue:

ARE THE RISK MANAGEMENT SYSTEMS OF OIL OPERATORS AND HELICOPTER OPERATORS SUFFICIENT AND ADEQUATE TO ENSURE THE RISKS OF HELICOPTER TRANSPORT ARE AS LOW AS REASONABLY PRACTICABLE IN THE NEWFOUNDLAND AND LABRADOR OFFSHORE?

Cougar Submission to Issue #2

Cougar can only properly speak to the risk management systems which it has implemented. From its perspective, Cougar submits that it has put a risk management system in place which meets and often exceeds the regulatory requirements currently in place. Cougar submits that the risk management system in place ensures that the risks of helicopter transport are as low as reasonably practicable in Newfoundland and Labrador.

During phase one of this Inquiry, Cougar made a complete copy of its safety management system available, on a confidential basis. To assist in responding to this phase of the Inquiry, we have attached as Appendix "A" a summary of some of the salient principles and procedures which are found in the complete SMS. We request that this appendix receive the same confidential treatment as the complete SMS.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #3

Issue:

WHAT IS THE ROLE OF ORGANIZATIONAL SAFETY CULTURE IN OFFSHORE HELICOPTER TRANSPORT?

Cougar Submission to Issue #3:

Safety culture is the most important tool an organization can possess in relation to offshore helicopter transport. As Mr. Banks testified, safety culture regulates:

> "How an organization behaves when no one is watching"

The safety culture at Cougar is one which places the preservation of life and equipment as the primary corporate goal. The Safety Management System (SMS) in place at Cougar, which was discussed in the response to Issue #2, is a direct product of the safety culture at Cougar. At the same time, the design and implementation of the SMS has further fostered a culture where safety is, at all times, given the highest priority.

A key element of the safety culture at Cougar is the non punitive nature of the SMS. By maintaining focus on safety issues, and not creating blame within the organization, each employee can make safety a priority without fear of undue recrimination for either making a mistake, or identifying a safety concern which requires correction.

Unless all employees are equally committed to the safety culture, the SMS merely represents another set of rules to be followed. Cougar addressed this potential concern by ensuring that all employees were empowered to

participate fully in the development of the SMS. Again, as Mr. Banks noted:

> "It's not ... the management's safety management system. It's everybody's system. It's facilitated and developed by higher management, but everybody within the organization has a play and a participation within it."

The ownership of the SMS by all employees at Cougar is the most tangible manifestation of the safety culture at Cougar.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #4

Issue:

WHAT ARE THE MOST APPROPRIATE PRACTICES, STANDARDS AND FORMS OF INTERACTION BETWEEN THE C-NLOPB AND THE FOLLOWING:

a. **INDUSTRY (INCLUDING SUPPLIERS AND PROVIDERS);**
b. **INDUSTRY ASSOCIATIONS;**
c. **REGULATORS OF ASSOCIATION SERVICES;**
d. **OTHER DOMESTIC AND FOREIGN OIL AND GAS REGULATORS; AND**
e. **WORKER REPRESENTATIVES;**

AND ARE THESE INTEREACTION SUFFICIENT TO ENSURE REQUIREMENTS THAT ARE UNDERSTOOD, TIMELY, ACHIEVABLE AND ENFORCEABLE?

Cougar Submission to Issue #4

To the extent that C-NLOPB practices, standards and forms of interaction are intended to or should deal with Aviation safety, Cougar encourages C-NLOPB to engage directly with oil operators and Transport Canada on such matters.

Cougar must and does comply with all standards contractually set by its oil operator customers and, at a minimum, with all rules, requirements, directives and regulations imposed by Transport Canada.

C-NLOPB through its interaction with operators and Transport Canada may seek to influence these standards.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #5

Issue:

DOES THE C-NLOPB USE BEST PRACTICES IN RELATION TO ITS REGULATORY ROLE IN HELICOPTER TRANSPORT SAFETY?

Cougar Submission to Issue #5

Cougar has no basis to conclude that C-NLOPB does not use best practices in its current regulatory role in respect to helicopter transport safety.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #6

Issue:

WHAT IS THE APPROPRIATE STANDARD OF FIRST RESPONSE SEARCH AND RESCUE THAT THE C-NLOPB SHOULD REQUIRE OF ALL OPERATORS IN THE NEWFOUNDLAND AND LABRADOR OFFSHORE?

Cougar Submission to Issue #6

Cougar considers the newly adopted first response search and rescue standard to be reasonable and achievable as long as it is able to maintain a dedicated search and rescue helicopter and crew for this specific purpose. The present standard provides for a thirty minute wheels up SAR response after receipt of an emergency notification from a Cougar transport helicopter during normal flight time operations. Outside of normal flight time operations, Cougar's SAR response is sixty minutes wheels up.

There would be no circumstances in which a Cougar passenger transport helicopter operates offshore St. John's when those operations would fall outside of Cougar's normal flight time operations and accordingly, whenever Cougar's passenger helicopter(s) are operating, the Cougar SAR response would be thirty minutes wheels up.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #7

Issue:

ARE THERE CIRCUMSTANCES, OTHER THAN DECLARED EMERGENCIES, WHEN A RESCUE HELICOPTER SHOULD BE DISPATCHE TO ASSIST A TRANSPORT HELICOPTER?

Cougar Submission to Issue #7

In addition to declared emergencies, additional circumstances which would give rise to a Cougar search and rescue response would include any occasion when any transport helicopter flight crew requests assistance or escort. Such request for assistance or escort by flight crew would be at the discretion of the flight crew, or as directed by a procedures or checklist item, and may include circumstances involving a drive train anomaly, warning light, or malfunction; an engine anomaly malfunction or indication; an electrical malfunction in more than one system, such as dual A.C. generator, dual D.C. converter or one A.C. generator and A.P.U.; or in the event of a suspected fire.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #8

Issue:

SHOULD THERE BE A MORE FORMAL PROTOCOL REGARDING THE ROLES OF THE DEPARTMENT OF NATIONAL DEFENCE AND THE HELICOPTER OPERATOR REGARDING FIRST RESPONSE?

Cougar Submission to Issue #8

There presently exists a Canadian national search and rescue program that is linked to any filed flight plan that is overdue. The national plan also covers Mayday and Pan calls. It would be difficult for Cougar to stipulate additional conditions in addition for those provided in the national plan. It is doubtful whether offshore workers require any additional protective layer of search and rescue response, regardless of who might provide those services.

It should, however, be noted that a request by a transport helicopter flight crew for assistance or escort without the declaration of an emergency would not trigger the engagement of the national plan protocol as it presently exists. While a policy could be adopted to provide notification by Cougar's Operational Control Center to the Joint Rescue Coordination Center in Halifax ("JRCC") in the event that the Cougar SAR aircraft has been dispatched as a result of a request for assistance or escort, it is not known whether such notification would then result in the automatic dispatch of additional SAR equipment by JRCC.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #9

Issue:

ARE OPERATIONAL LIMITATIONS ON HELICOPTER TRANSPORT, IN ADDITION TO THOSE DICTATED BY TRANSPORT CANADA, REQUIRED TO ENSURE THE STANDARED OF FIRST RESPONSE SEARCH AND RESCUE IS ABLE TO BE MAINTAINED AT ALL TIMES? (NOTE: FOR EXAMPLE, OPERATIONAL SEA STATES, NIGHT FLIGHT AND LOW VISIBILITY.)

Cougar Submission to Issue #9

As noted in Cougar's submission in respect to issue number 6, there would not likely be circumstances in which Cougar could not meet the thirty minute standard of first response during Cougar's normal flight time operations. In addition, Cougar's approach to helicopter transport to and from the offshore is designed to be as safe as reasonably practicable.

Cougar limits its flight operations to those conditions for which the aircraft is certified by Transport Canada. Within these certified conditions, ultimate authority as to whether a passenger flight will operate is in the hands of the Pilot in Command and the Cougar Flight Dispatch, both of whom must agree in order to allow a flight to operate. That determination is only made following a comprehensive risk assessment by the Pilot in Command and the Cougar Flight Dispatcher in advance of each flight and with the input of Cougar's Chief Pilot or Director of Flight Operations in the event of any perceived elevated risk factor. A flight departure is only authorized in circumstances where existing conditions are appropriate for the commencement of the flight and where such conditions are not forecasted to deteriorate within the timeframe allocated for both the St. John's outbound and the return flight.

Further operational limits can be imposed by individual Offshore Platform Installation Managers who by reason of localized adverse conditions in the vicinity of a particular platform can deny helicopter landing at that facility. A passenger flight would not be initiated by Cougar in the face of such adverse conditions. Furthermore, should adverse conditions develop after a flight has been launched, that flight would be returned to St. John's.

Operational factors can vary widely over time and space. Any attempt to regulate to protect against all possibilities will invariably be under-inclusive or overly restricted. The regulatory regime of Transport Canada implicitly recognizes this dilemma and sets standards accordingly.

A key tool ensuring that the risks of helicopter transport remain as low as reasonably practicable in the Newfoundland and Labrador offshore is the exercise of discretion by those who can immediately access the nature of unfolding conditions and act accordingly.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #10

Issue:

SHOULD THE C-NLOP IMPOSE ADDITIONAL OPERATIONAL REQUIREMENTS ON OPERATORS TO ENSURE THAT THE RISK FROM HELICOPTER TRAVEL IN THE NEWFOUNDLAND AND LABRADOR OFFSHORE IS AS LOW AS IS REASONABLY PRACTICABLE? (NOTE: FOR EXAMPLE, SAFETY SYSTEMS, AUXILIARY FUEL TANKS, LOCATION OF AND RESTRICTIONS ON SEATING, SAFETY SCREENING, ETC.)

Cougar Submission to Issue #10

While this is primarily an issue for oil operators, Cougar does not consider it necessary to impose any additional operational requirements on oil operators to ensure that the risk associated helicopter travel in the Newfoundland and Labrador offshore is as low as is reasonably practicable.

Cougar flight operations are, at a minimum, conducted in full compliance with all operational limitations, restrictions and conditions imposed by Transport Canada including specifications for and location of any necessary auxiliary fuel tank. Such rules and restrictions are applicable throughout Canada within Transport Canada's jurisdiction, and in general, Cougar's flight operations also meet or exceed international standards (FAA, EASA).

Cougar passenger helicopters flying offshore St. John's are already configured so as to provide each passenger seat row with its own push out window.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #11

Issue:

CAN HELICOPTER TRANSPORT SAFETY BE AFFECTED BY THE CAPACITY OF THE HELICOPTER TRANSPORT FLEET AND, IF SO, WHAT ROLE SHOLD THE C-NLOPB PLAY IN THE DETERMINATION OF FLEET CAPACITY?

Cougar Submission to Issue #11

In cooperation with the oil company operators, Cougar's St. John's fleet capacity is maintained at a level to ensure that it can safely meet its contractual transportation obligations while, in every circumstance, and at the very minimum, meeting all Transport Canada's operational limitations, conditions and regulations and operating well within the certified limits of its contracted aircraft.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #12

Issue:

WHAT ARE THE APPROPRIATE STANDARDS OF OFFSHORE HELICOPTER SAFETY TRAINING TO ENSURE THAT THE REISH TO PASSENGERS IS AS LOW AS IS REASONABLY PREACTICABLE, BOTH DURING TRAINING AND HELICOPTER TRANSPORT?

Cougar Submission to Issue #12

While passenger training is not a Cougar responsibility, Cougar encourages appropriate passenger training and training certification and recertification.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #13

Issue:

WHAT PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING IS NECESSARY FOR HELICOPTER PASSENGERS AND PILOTS; WHAT ARE THE STANDARDS, AND SHOULD THE C-NLOPB REQUIRE GUIDELINES TO ENSURE SUCH EQUIPMENT AND CLOTHING IS PROPERLY FITTED?

Cougar Submission to Issue #13

Personal protective equipment mandated by Transport Canada for pilots includes an immersion suit and lifevest. In addition to these mandated items, Cougar flight crew must also wear a personal locator beacon, helicopter emergency egress device and protective footwear. Individual crew members are also authorized and encouraged to wear a flight helmet.

1. The Pilot Immersion Suit System

1. Undergarment – First Layer Protection

   The Stanfield's 2 layer undergarment offers a soft inner layer of blended cotton and polyester next to the skin. The outer layer is a moisture moving blend of wool and polyester which maintains warmth and a dry microclimate next to the skin. The additional insulating barrier is created when air is trapped between the two layers.

2. Aircrew Flight Suit - Second layer protection

   Cougar aircrew wear the Sparrel one piece, 100% Nomex IIIA, Gortex material Flight Suit. The special fire retardant designed garment protects against flash fire events and is also designed for maximum comfort for everyday wear.

3. Pilot Immersion Suit - Third layer protection

The Viking PS4177 pilot immersion suit utilized by Cougar is considered a "best in industry" item selected in 2008 by both the Chief Pilot and Cougar's safety department after the completion of global research.

The Viking PS4177 outer shell is a special design immersion suit appropriate for various types of aircraft. Viking uses only top quality material that allows the body to breathe for comfort during extended wear. The Viking suit is tailored fit to an individual and provides at least six hours of protection from hypothermia in cold water.

Viking has extensive experience in supplying specialized pilot suits, and custom designs to suit exacting requirements. Zips are placed differently depending on the aircraft type and the position of the safety straps. Pockets are strategically placed for easy access and can include map and pencil pockets.

The Viking PS4177 Pilot suit provides top level Waterproof breathable protection using NOMEXIII Gore-Tex® material. This suit provides watertight wrist and neck seals for watertight performance.

There are currently no standards for Pilot survival suits established by either the FAA, or Transport Canada. They are a product which has been developed out of necessity over decades of work with Airforce and private aircraft operators based on the unique requirements of each.

Designs follow common industry practices, but there is not a standard performance criterion for such immersion suits at this time.

2. Pilot Lifevest

CAR's Regulation 602.62 (1)

Life Preservers and Flotation Devices

602.62 (1) No person shall conduct a take-off or a landing on water in an aircraft or operate an aircraft over water beyond a point where the aircraft could reach shore in the event of an engine failure, unless a life preserver, individual flotation device or personal flotation device is carried for each person on board.

602.62 (2) No person shall operate a land aeroplane, gyroplane, helicopter or airship at more than 50 nautical miles from shore unless a life preserver is carried for each person on board.

CAR's Regulation 201.10 (1)

Appliance Identification

201.10 (1) The manufacturer of an appliance for which there is an airworthiness standard in the *Airworthiness Manual* shall place thereon, in accordance with subsection 201.05(2), the identification information referred to in subsection (2).

Cougar utilizes the Switlik Special Operations, Helicopter Crew Vest that meets all Transport Canada and FAA requirements.

3. Personal Locator Beacon (PLB)

Although there is no regulatory requirement for aircrew to wear these devices, Cougar has mandated that all aircrew be in possession of the AEROFIX 406 PLB during over land and over water flying operations.

At present, these units are considered "best in industry" beacons and like all company lifesaving equipment, are tracked for inspection and maintenance cycles through Cougar's Lifesaving Equipment Tracking System.

The AEROFIX 406 PLB features an internal GPS, Fast ACQ GPS technology and an external GPS optical interface. The LAT/LON are transmitted, providing rescue agencies the exact position to within 110 yards. At a mere 3.03"L, 1.74"W, 5.71"H and weight of only 12 oz. this is the smallest and lightest PLB in the world. The device Transmits on 406 MHz via the COSPAS-SARSAT satellite system with a registered unique, digitally coded distress signal and 121.5 MHz (SAR homing frequency). The device incorporates a full functional self test of internal circuitry and battery power. It incorporates a flat, stainless steel antenna which wraps compactly around the unit for easy storage and is ready for rapid deployment.

The unit Floats to avoid loss if dropped in water. The unit GPS interface (GPS interface NMER 0183) allows the downloading of GPS coordinates prior to activation; once activated, the LAT/LON transmits on first burst insuring that the distress message reaches search and rescue virtually instantaneously. The units GPS acquires LAT/LON when the unit is activated, the LAT/LON are transmitted as soon as acquired providing the units exact position to the within 100 meters (110 yards within 3 minutes of satellite reception.

4. **Helicopter Emergence Egress Device (HEED 3)**

Although there is no regulatory requirement for aircrew to carry these devices, Cougar Helicopters Inc. has mandated the use of the HEED 3 for all over water flight activity. The HEED 3 is an updated version of the original HEED. A compact, lightweight and reliable self-contained breathing apparatus, the HEED 3 is designed to increase the survivability of military and commercial personnel in short-term out-of-air emergencies.

5. **Protective Footwear**

The Cougar Helicopter Inc. Safety Management System, Chapter 8.30 provides in part:

Foot Protection: Approved safety footwear in the form of boots or toe caps must be worn by all employees and contractors in work areas where a foot injury hazard exists. Foot protection is mandatory equipment for pilots flying offshore and ramp staff working on a daily basis.

6. **Helmet/Headsets**

There is presently no regulatory requirement for aircrew to wear protective helmets. Cougar Helicopters Inc. has put in place a cost sharing assistance program for aircrew to purchase an ALPHA helicopter pilot helmet with the company paying one half of the total cost.

To date Cougar has transitioned from a mere 28% to a very significant 85% of the company aircrew wearing protective helmets during flying operations and is confident that the number will rise in the future. The remaining 15% of company aircrew utilize the Davie Clarke Aviation Headset.

Summary

Cougar is committed to employee compliance with Transport Canada's and its own Personal Protective Equipment criteria and directives. The safety department in conjunction with Cougar's General Manager have in fact developed and implemented an independent company PPE Discipline Policy reminding all employees of senior management's regard for safety considerations.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #14

Issue:

ARE CHANGES NEEDED TO MAXIMIZE WORKER AND PILOT PARTICIPATION IN THE DEVELOPMENT, IMPLEMENTATION AND MONITORING OF HELICOPTER SAFETY INITIATIVES AND ACTIVITIES?

Cougar Submission to Issue #14

It is Cougar's position that no changes are necessary to maximize pilot participation in the development/implementation/monitoring of helicopter safety/initiatives/activities. Participation in Cougar's Safety Management System program is regarded as the responsibility of all employees and is considered an inherent element of the employment contract.

All Cougar Standard Operating Procedures instruct flight crews to contribute and assist in the development of better software and safety processes. Cougar's Safety Reporting System provides feedback on issues that require adjustment for enhanced safety. Cougar's Helicopter Flight Data Monitoring System provides feedback on flight crew compliance and allows the flight crew training department to proactively adjust processes and procedures. Cougar's Safety Management System Committee meets once a month and the committee composition includes aircrew representation.

Cougar does not treat its Safety Management System as a static item. At Cougar, aircrew involvement in improvements and enhancements to safety is encouraged and fostered.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #15

Issue:

SHOULD OFFSHORE WORKERS HAVE A LEVEL OF PERSONAL ACCOUNTABILITY FOR THEIR OWN SAFETY IN HELICOPTER TRANSPORT? (NOTE: FOR EXAMPLE, CLOTHING TO BE WORN UNDER THE SUIT, FITNESS TRAINING AND REPORTING.)

Cougar Submission to Issue #15

While Cougar, oil operators and Transport Canada have mandated various safety equipment and measures, helicopter transportation safety is enhanced when all passengers take some personal accountability for their own safety and the safety of others. Such personal accountability might include taking an enthusiastic role in training programs, making the appropriate selection of undergarments during flights, maintaining a reasonable level of personal fitness, and for non-swimmers, perhaps enrolling in swimming lessons to increase their comfort level and confidence in a water environment.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #16

Issue:

DOES THE C-NLOPB EXERCISE SUFFICIENT OVERSIGHT OF THE OIL OPERATORS, AVIATION CONTRACTORS AND SUBCONTRACTORS TO ENSURE THAT THE RISK TO WORKERS FROM HELICOPTER TRANSPORT IS AS LOW AS REASONABLY PRACTICABLE?

Cougar Submission to Issue #16

As previously indicated Cougar's position is that oversight of aviation contractors is and should be, primarily, a role for Transport Canada and the oil operators.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #17

Issue:

SHOULD THE C-NLOPB AND OIL OPERATORS' SAFETY AVIATION AUDITS INCLUDE REVIEWS OF PAST RESPONSES TO DECLARED EMERGENCIES AND EMERGENCY PREPAREDNESS EXERCISES?

Cougar Submission to Issue #17

Cougar considers the responsibility for aviation safety audits to be the responsibility of Transport Canada and the oil operators. Again, C-NLOPB's assumption of such a role would presumably necessitate the engagement of aviation experts and would be considered by Cougar to be an unnecessary additional audit layer.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #18

Issue:

WHAT INFORMATION FROM THE HELICOPTER OPERATOR ABOUT FLIGHT OPERATIONS SHOULD THE C-NLOPB REQUIRE THE OIL OPERATORS TO PROVIDE TO OFFSHORE WORKERS? (NOTE: FOR EXAMPLE, ALERT SERVICE BULLETINS, ARIWORTHINESS DIRECTIONS, INCIDENTS REPORTS, INFORMATION REGARDING DEPARTURES FROM NORMAL FLIGHT TIMES, ROUTINES AND THE REASONS.)

Cougar Submission to Issue #18

This issue raises complex implications. Alert service bulletins, airworthiness directives, incident reports and the like are generally, by their nature, highly technical document. The publication and dissemination of such technically detailed material to offshore workers, who generally would have no aviation expertise to realistically assess such information, is really of very limited value and may serve to unduly alarm passengers and unnecessarily raise anxiety levels. More emphatically, any requirement that places any pre-flight obligation on aircrew to meet with and brief passengers on such issues and potentially allowing for passenger interaction with flight crew could place unnecessary strain on flight crew in their pre-flight preparation and review and would be strongly discouraged.

Dissemination or publication of such information, if it is to occur, should at the very least, be limited to delivery of such information by Cougar to the specific logistics personnel with each of the oil operators who, by virtue of their respective positions and experience would have a greater appreciation for the implications of such bulletins, directives and reports.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #19

Issue:

DOES THE C-NLOPB HAVE SUFFICENT RESOURCES AND EXPERTISE, INCLUDING ACCESS TO INDEPENDENT AVIATION EXPERTISE, TO EVALUATE WHETHER A PRPOSAL OR PLAN FOR HELICOPTER TRANSPORT FROM INDUSTRY ENSURES THAT THE RISKS OF HELICOPTER TRANSPORT ARE AS LOW AS REASONABLY PRACTICABLE?

Cougar Submission to Issue #19

Except to the extent that C-NLOPB aviation expertise is addressed in respect to other issues, Cougar makes no submission on this issue.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #20

Issue:

SHOULD THE C-NLOPB MORE DIRECTLY INVOLVE ITSELF IN STUDIES AND RESEARCH IN NEWFOUNDLAND AND LABRADOR, AND IN OTHER JURISDICTIONS, TO IMPOROVE SAFETY WHERE OFFSHORE OIL INDUSTRY USES HELICOPTER TRANSPORT? (NOTE: FOR EXAMPLE, NORTH SEAR STUDIES ON PREVENTING INVERSION OF DITCHED HELICOPTERS AND ENHANCEMENT OF PASSENGERS' ABILITY TO ESCAPE.)

Cougar Submission to Issue #20

Cougar makes no submission on this issue.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #21

Issue:

SHOULD THERE BE SAFETY CONFERENCES FOR ALL PARTIES INVOLVED IN OFFSHORE HELICOPTER TRANSPORT, AND IF SO, HOW OFTEN SHOULD THEY BE HELD?

Cougar Submission to Issue #21

Cougar makes no submission on this issue.

OFFSHORE HELICOPTER SAFETY INQUIRY
RESPONSE TO ISSUE #22

Issue:

HOW OFTEN SHOULD THE C-NLOPB REVIEW ITS REGULATIONS, GUIDELINES AND STANDARDS WITH RESPECT TO OFFSHORE HELICOPTER TRANSPORT?

Cougar Submission to Issue #22

Cougar makes no submission on this issue.

Appendix "A" -- Response to Issue #2

"OHSI-2 Are the risk management systems of oil operators and helicopter operator sufficient and adequate to ensure the risks of helicopter transport are as low as reasonably practicable in the Newfoundland and Labrador offshore?"

Cougar Response:

Risk Management Systems are in place within Cougar Helicopter's Integrated Safety Management System utilizing specially designed tools to ensure flight operations and ground operations are reduced to ALARP (as low as reasonably practicable).

These Risk Management tools used by Cougar include, but are not limited to:

1. Safety Case Studies – Helicopter Operations
2. Cougar Helicopters Inc. Aviation Safety Risk Assessments
3. Aircrew Daily Risk Assessment Program
4. Third Party Risk Assessments
5. MOC - Management of Change Process
6. Audit and Inspection Program
7. Investigation and Event Management
8. Pre-Employment and Random Drug and Alcohol Screening
9. Emergency Preparedness and Response
10. Safety Management System Measurement and Improvement

The following material provides further explanation on each of the processes listed above.

1. Safety Case Studies – Helicopter Operations

Scope

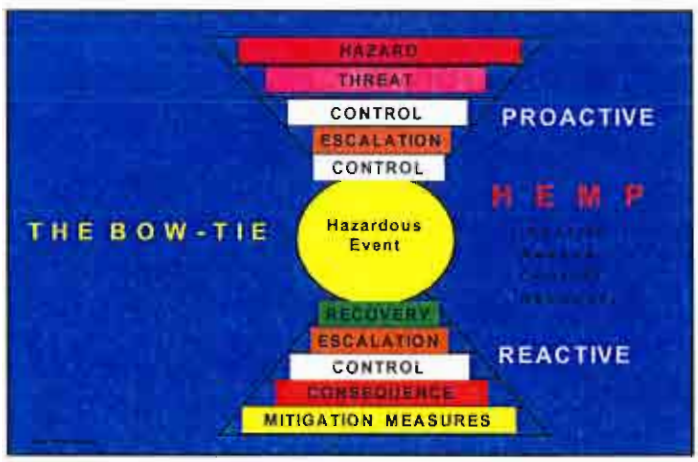
Helicopter aviation requires the management of many variables and, for this reason, hazards and risks are ever present. Hazards can be triggered by situations or can be preexisting and if they are not controlled, they could cause harm to people or equipment. The manifestation of a hazard is known as an event. Risk is an expression of the impact of an undesired event in terms of event severity and event likelihood.

Purpose

Cougar Helicopters Inc. ("CHI") is continually striving to achieve the best possible safety culture. This document describes in a summary manner some of the measures which have been implemented for safe Helicopter Flight Operations through the use of a comprehensive Hazard and Risk Analysis. It is arranged as a hazard register and contains limitations and operating rules to which all employees shall adhere, in order to mitigate against each of the individual hazards.

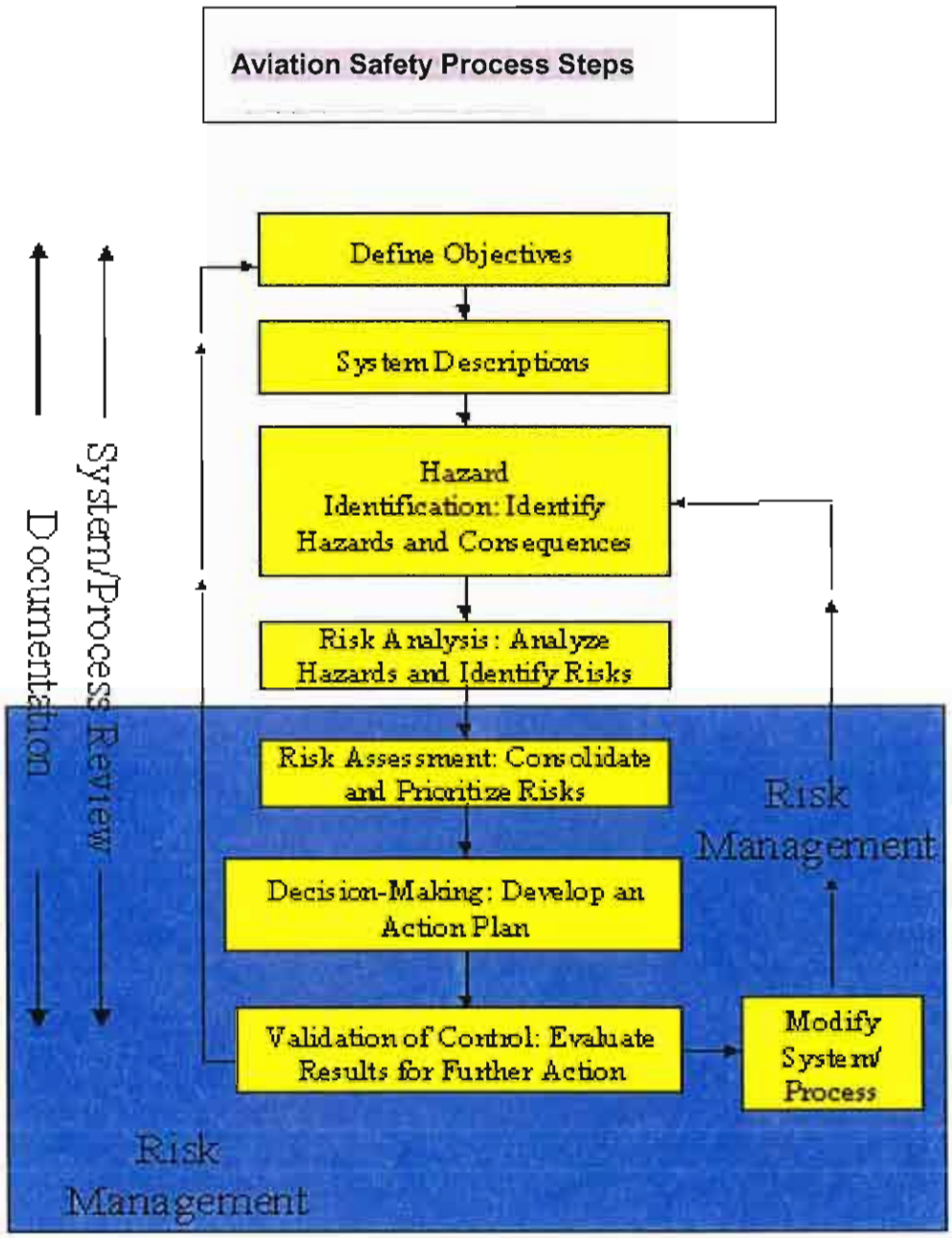
Aim

The Hazard and Risk Analysis is crucial to all aviation operations. Therefore, the main objective of this process is to methodically identify all hazards, risks and safety issues associated with flight operations and associated ground operations. The analysis will not only identify those hazards and risks, but also rate the consequence of each to ensure the mitigation levels are rated as low as reasonably practicable (ALARP). Once this is accomplished a Bow-Tie mitigation sequence is applied.



Criteria

Hazards are identified, and risks are analyzed, prioritized and assessed for within the decision making process. This process provides for validation of decisions and evaluation for desired results and/or the need for further action by CHI.



Safety Case Risk Assessment Matrix (RAM)

The purpose of the Risk Assessment Matrix within the Safety Case Study is to properly prioritize those hazards and risks requiring the highest degree of attention.

The following two matrices both describe the type of event that may/could occur during flight operations on a scale from "Catastrophic" to "Minor", against the probability of that event occurring on a scale from "Frequent" to "Improbable".

The risk levels contained in the table are on a scale from "No action required" to "Action must be taken", and these risk levels are included in the Hazard Log.

A full description of the terms used is listed at the end of the table.

As a general rule, if the effects of an event are relatively minor, and it is improbable that such an event would occur in any case, then it may not be necessary to guard against such an event. Conversely, action is required to mitigate against any event that could have catastrophic consequences no matter how improbable such an event may be.

COUGAR - SMS RISK ASSESSMENT MATRIX

POTENTIAL CONSEQUENCE OF OCCURRENCE					INCREASING LIKELIHOOD >				
	PEOPLE	ASSETS	ENV'MENT	REPUTATION	A Improbable	B Known within Industry	C Happened before in Company	D Reported > 3X / YR In Comp	E Reported >3X / YR in Location
0	No Injury	Zero Damage	Zero Effect	No Impact	0	0	0	0	0
1	First Aid Injury	Slight Damage	Slight Effect Not Reportable to External Agency	Slight Impact Specific Party	1	2	3	4	5
2	Medical Treatment Injury	Component Level Replace/ Repair	Minor Effect Reportable Cleanup Required	Limited Impact Localized to Area of Occurrence	2	4	6	8	10
3	Lost Time Injury (< 7 days)	Unit Level Damage Involving Multiple Major Components	Localized Effect External Agencies Involved On Site	Provincial Impact Multiple Customer Groups	3	6	9	12	15
4	Long Term Disability Single Fatality	Major Damage Repairable	Major Effect	National Impact	4	8	12	16	20
5	Multiple Fatalities	Extensive Damage Complete Loss	Massive Effect	International Impact	5	10	15	20	25

Severity and Likelihood Definitions:

Severity Scale Definitions	
Catastrophic	Results in fatalities and/or loss of the system.
Critical	Severe injury and/or major system damage.
Marginal	Minor injury and/or minor system damage.
Negligible	Less than minor injury and/or less than minor system damage.

Likelihood Scale Definitions		
Frequent	Individual	Likely to occur often.
	Fleet	Continuously experienced.
Probable	Individual	Will occur several times.
	Fleet	Will occur often.
Occasional	Individual	Likely to occur sometime.
	Fleet	Will occur several times.
Remote	Individual	Unlikely to occur, but possible.
	Fleet	Unlikely but can reasonably be expected to occur.
Improbable	Individual	So unlikely, it can be assumed it will not occur.
	Fleet	Unlikely to occur, but possible

2. Cougar Helicopters Inc. Aviation Safety Risk Assessments

The SMS Aviation Safety Risk Assessment is performed in much the same format and methodology as a Safety Case using the RAM function, but is initiated for new operations especially in unfamiliar environments or geographical locations. The Aviation Safety Risk Assessment is utilized in conjunction with the Management of Change process. This undertaking proves highly desirable in identifying potential hazards and evaluates risks against the company's present operating procedures.

3. Aircrew Daily Risk Assessment Program

The Aircrew Daily Risk Assessment Matrix (RAM) has been developed to identify the factors crews should be aware of for each offshore flight. It is an initiative to quantify the 'relative risk' associated with each and every flight prior to being given formal dispatch release.

A matrix has been developed as a tool to help improve crew awareness of the listed factors and how they could influence the flight. It is to be completed by individual crews on the form provided and will highlight the areas where risk may be reduced or mitigated prior to flight. The completed table is normally handed to dispatch before the flight.

Pilots will be required to complete the RAM prior to each flight and advise either the Chief Pilot or Director of Flight Operations of any score of 8 and over.

The system is in no way designed as a GO, NO GO tool or to undermine the PIC's role in the decision to fly or not to fly. Instead, the system assists the PIC to help him/her to quantify the various factors which may influence the safe outcome of each flight, and to address these factors prior to dispatch.

IF AT ANYTIME A CREW IS CONCERNED WITH A FLIGHT'S STATUS OR EXECUTION THEN CLARIFICATION IS TO BE SOUGHT FROM THE CHIEF PILOT OR DIRECTOR OF FLIGHT OPERATIONS– REGARDLESS OF THE RAM SCORE.

4. Third Party Risk Assessments

Periodically, Cougar Helicopters Inc. is requested by a customer to attend and participate in a Third Party Risk Assessment.

Participants from Cougar normally include the General Manager, Director of Flight Operations, Director of Safety, Director of Maintenance but Cougar's participation is not necessarily limited to these individuals, depending on topics and risks to be assessed.

Cougar representatives provide critical input and foster discussion. Their aviation expertise provides and assistance within the parameters set by the individual customer requesting the assessment. All actions raised by the group are acted upon swiftly to ensure that risk and hazards presented are reduced to acceptable levels or ALARP.

5. MOC - Management of Change Process

This procedure provides a systematic method of responding to change in operations and the workplace that could be detrimental to the health and safety of affected personnel, or contribute to environmental or damage to equipment.

Responsibility

The responsibility for implementing this procedure rests with the manager or supervisor in charge of the department affected by the change.

Scope

In this context, a change is defined as any alteration in business operation that will have an effect on the established or planned control of risk.

New hazards and risks can be introduced into the workplace at any time due to changes in equipment, materials, personnel and processes. Management of Change is employed to ensure that any such new conditions are evaluated as they occur, so that hazards and risks can be identified and then eliminated or minimized.

Recognition of Change

The first step in the Management of Change is to anticipate and recognize changes in the operation or workplace that could potentially increase hazards and risks. This must be done before the changes are implemented to allow any hazards and risks to be identified and mitigated. Examples are listed below:

- Facility reconfiguration
- Flight Operations
- Changes in local safety laws and regulations
- Introduction of a new process into the workplace (permanent or temporary)
- Introduction of new equipment, materials, chemicals in the workplace (permanent or temporary)

Evaluation of Change

Temporary changes may result in a significant increase in risk because limited time is available to initiate appropriate controls. The following should be considered:

- Do supervision and training arrangements need to be changed?
- Are procedures in place to return the process to normal operation once the temporary change is complete?
- Is the change within the original scope of work or is there an additional requirement for authorization?

Control Measures

Recommendations must be made to eliminate or reduce potential hazards and risks, with responsibilities assigned and completion dates documented. Also, the following controls should be used:

- Incorporate warning devices
- Issue personal protective equipment
- Design for minimum risk
- Employ procedures and training
- Incorporate engineered safety devices

It is critical that controls are implemented before the change takes effect, including the training and awareness of personnel working in a changed area of operations that is affected.

6. Internal Audit and Inspection Program

Audits and inspections are conducted to determine:

- Whether the operation or facility is being managed in accordance with the departmental processes and regulations.
- Whether the work activities comply with the documented safety procedures.
- Whether the documented procedures are implemented effectively.
- Whether the procedures are suitable to achieve the objectives.
- To ensure a safe and healthy work environment to facilitate all staff.

Types of Audits

There are three different types of auditing conducted at Cougar Helicopters Inc.

- Internal Departmental (Flight Op's, SMS, Quality Assurance, Finance etc.)
- Regulatory Third Party (Transport Canada, AOSH, OSHA, QMI - ISO)
- Customer Third Party (All Cougar Customers)

The Q5 Systems Auditing Program is the central database of all audit checklists, findings and corrective actions. This simplified approach enables the user to review all departmental and third party audits in a central location. Outstanding items are recognizable throughout all departments to ensure we do not lose sight of pending corrective actions that must take place.

Responsibility

Departmental appointed auditors are selected to represent departmental activities. Internal audits are conducted by a single auditor or an audit team comprised from the department. An audit schedule is developed and must be followed to ensure completion on an annual basis.

7. Investigation and Event Management

All accidents, incidents and events reported will be investigated and analyzed, regardless of their severity.

The investigation shall begin as soon as possible following the accident, incident or event. The severity of the accident/incident will obviously determine the persons to be involved in the investigating team and the time required to conduct a thorough and effective investigation.

Choosing the investigation team and assigning the severity categories is the responsibility of the DSMS.

Accident/Incident Severity Categories

- Major Incident (**Level 1**): Incident involving loss of life, major injuries (e.g., amputations, serious eye and head injuries, injuries requiring admission to hospital.).

  Extensive aircraft, property or equipment damage in excess of $50,000.

  Explosions, fires handled by emergency services.

- Serious Incident (**Level 2**): All lost time accidents (LTA).
  Aircraft, property or equipment damage in the range of $10,000 to $50,000.

  Fires handled by staff.

- Minor Incident (**Level 3**): Personal injuries requiring first aid/medical treatment only.
  Minor property damage (e.g., broken glass, broken minor parts to equipment, etc.)

Investigation Level Breakdown

Level 1 Investigation (Major)

All accidents, incidents and events in this category shall be investigated by a team comprised of the following personnel:

- Managers from two levels above the department supervisor
- The Director of Safety Management System
- Department Supervisor
- Others as deemed necessary by DSMS

All Level 1 investigations shall be completed and documented through Cougar Helicopters formal investigation process outside of the Safety Event Database. Distribution of completed report to Senior Management is mandatory.

Level 2 Investigation (Serious)

All accidents, incidents and events in this category shall be investigated by a team comprised of the following personnel:

- Manager one level above the department supervisor
- The Director of Safety Management System
- Department supervisor
- Others deemed necessary

All Level 2 investigations shall be completed and documented through Cougar Helicopters formal investigation process outside of the Safety Event Database. Distribution of completed report to Senior Management is mandatory.

Level 3 Investigation (Minor)

All accidents, incidents and events in this category shall be investigated by a team comprised of the following personnel:

- Manager one level above the department supervisor
- The Director of Safety Management System
- Department supervisor
- Others deemed necessary

All Level 3 investigations shall be completed and documented through the Safety Event Database. Distribution of completed report is available to all employees on the database as closed events, both Aviation and HSE.

7.3 Investigation Analysis

Once the investigation ensues, the root cause of the event is identified by the Director of Safety System and his investigation team. Determining the root cause of an event assists in preventing a recurrence in future operations. There could be more than one cause, which is normally the case. Cougar Helicopters follows the SHELL approach.

S- *Software* - includes written items such as maps, SOPs, checklists, etc.

H- *Hardware* - physical aspects of the aircraft and associated handling equipment.

E- *Environment* - weather, NAV aids, company culture.

L- *Liveware* - other people. People who interact with the Pilot, or AME.

L- *Liveware* - Pilot or AME or individual at the center of the Event. Training, experience, stress, etc.

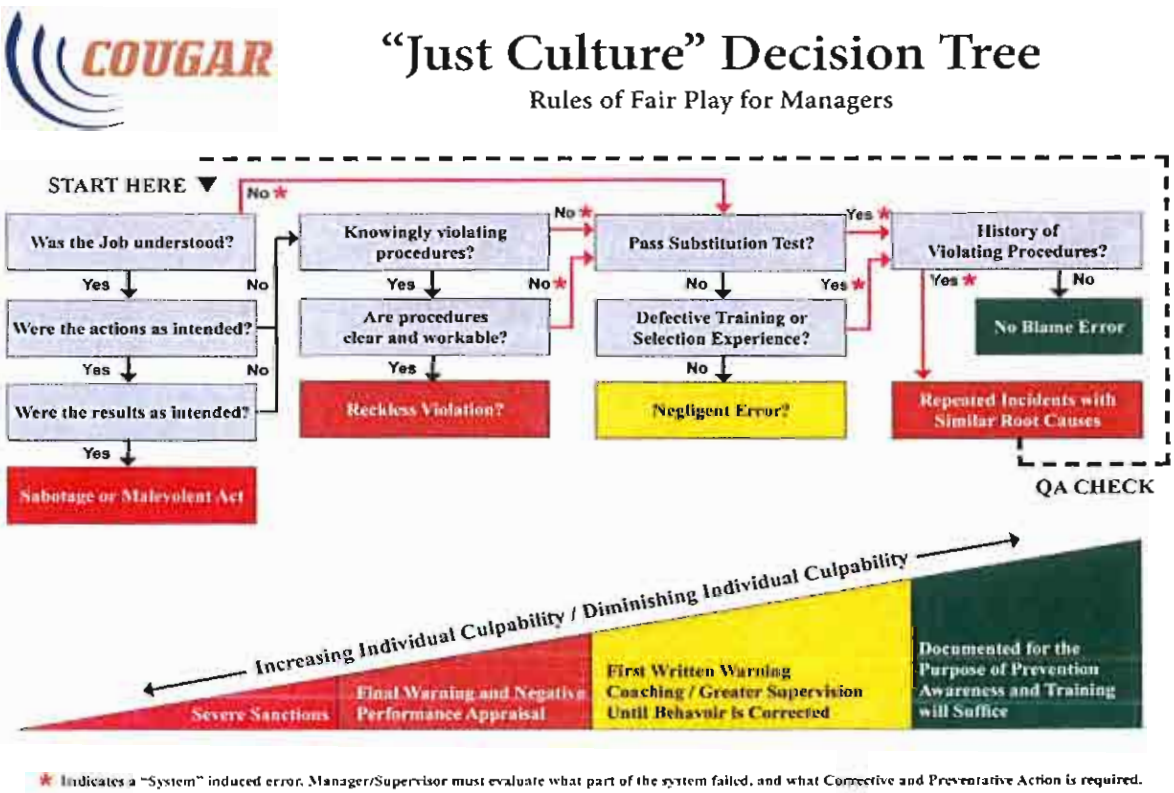
The DSMS will identify the above items that correspond to the deficiencies identified during the investigation. They are documented into the electronic event database for closing action and subsequent tracking/trending analysis.

The standard procedure provides that all accidents will be investigated and, generally, significant incidents will be subject to the same approach. At a minimum, the responsible Manager will review and understand what the primary and underlying causal factors were, with a view to improving working systems where possible.

If there is more than one investigator on the team, a member will be nominated as the lead investigator and will co-ordinate the investigation, manage the evidence gathered, and oversee the production of the subsequent report.

7.4 Just Culture Decision Tree

The culture in Cougar Helicopters supports a just and learning approach that does not seek to apportion blame as its primary purpose. It is recognized that human error can occur. When this happens it often results from a quest for expediency. In such cases, blame and subsequent punishment will not be delivered as the resolution to the problem, but this will not absolve all those involved, directly or indirectly, from accepting the responsibility for their actions. However, where appropriate, in cases of gross negligence or deliberate violation, appropriate disciplinary action will be taken.



Just Culture Decision Process

The purpose of the Just Culture Decision Tree tool is to ensure the consistent, objective, fair treatment of all staff, and to assist senior managers in decision making related to employee discipline.

When management is consistent, predictable and transparent, it promotes an objective response to incidents that involve staff. Cougar believes honest and open reporting will be the result. Though Cougar presently has a strong reporting culture, a guarantee of fair treatment promotes the safety culture because it:

a. Increases reporting by involving all Cougar Helicopters employees

b. Produces better informed management teams

c. Facilitates improvements in the safety system and processes

d. Increases staff confidence, which in turn improves Cougar's safety culture

The process described above promotes continuous, sustainable improvement of the management systems by creating a safe working environment for all staff. A sustained stream of remedial actions to prevent a recurrence will result, and feedback will be provided on the outcome of these actions, reinforcing the confidence in the staff, encouraging them to participate in the Safety Management System.

The Cougar Just Culture management decision aid is a tool that senior management can use to decide what post incident disciplinary action, if any is appropriate when considering the actions of employees involved in a particular incident.

The Just Culture Decision Tree is not a product of the blame culture model, but equally, it is not a product of a blameless culture model. It is essential that individuals fully appreciate they are responsible for their actions, and that disciplinary procedures may be implemented as a consequence of an intentional or grossly delinquent error. The General Manager has made a commitment that a just culture will prevail, and every employee will be treated fairly in all situations.

After an incident has been fully reviewed, and senior management is confident they have all pertinent information, they begin the process by at the first step of the flow chart.

Management must review each case in isolation, and focus solely on the incident giving rise to the analysis. This is important to ensure fairness and as much objectivity as possible. If there is a history of previous incidents involving the same individual, management will deal with the related incidents later in the flow chart.

Managers simply move from box to box answering the questions (yes or no), and follow the arrows until they arrive at the bottom of one of the four columns. The bottom of the column will indicate the appropriate level of action to be taken in response to the event (increasing/decreasing culpability).

Use the following guidelines to interpret the boxes:

1. *Was the job understood?*

Managers must identify whether the employees involved in the incident were fully aware of the task assigned, the hazards involved and the procedures that were to be followed.

2. *Were the actions as intended?*

The difficult task of identifying whether the actions were intended by the employee concerned rests with management. This should never be done in isolation, but should be decided by the General Manager of the division and, where possibl,e in consultation with the entire senior management team.

3. *Were the results as intended?*

This task, identifying whether the results were intended by the employee, rests with management. This should never be done in isolation, but should be decided by the Manager of the division and where possible in consultation with the entire senior management team.

4. *Sabotage or malevolent act?*

If the answer to the above box, "Were the results intended?" is yes, severe sanctions (usually including termination), are required to ensure the event is never repeated.

5. *Knowingly violating procedures?*

A decision must be made as to whether the employee knew the procedure, but knowingly did not comply with it. If management arrives at this box, they have already assumed sabotage is not a consideration. They are not to critically review the procedure at this point. The question at this stage of the analysis is simply whether the employee "knowingly" violated the procedure.

Situations in which the subject knowingly violated the procedure could include instances of alcohol or drug abuse, or filling a role within the company when a medical condition disqualifies the subject from occupying a specified position (regulatory requirements not met).

6. *Are procedures clear and workable?*

At this point management shall critically review the procedure that was violated, and determine whether the reason for the failure can be attributed to the lack of clarity, workability or logical flow to the written procedure.

Consideration must be given to the phenomenon where it is accepted practice to violate a certain procedure due to practicality. There may be a good reason for the procedure, but an equally good reason why staff ignore it and line management does not enforce it, such as "We've always done it this way". Amendments to the procedure should first be considered (ideally with the involvement of the offending employee) before disciplinary action is decided upon.

7. *Reckless violation?*

If the analysis leads to this box, it implies the employee was reckless in their behaviour. The assumption made in order to arrive at this box imply, **a)** though they did not intend for the negative outcome to happen, they did **b)** fully understand a clear directive from the company, and **c)** consciously violated the known procedure. The action was intended.

In this case the actions of senior management will require the involvement of Human Resources (accurate employee performance appraisal), the employee's direct supervisor (greater supervision), and the training department (awareness training).

8. *Pass substitution test?*

If management arrives at this box, they have determined that the employee had acted in good faith. They must now separate reasonable actions from unreasonable actions.

The substitution test is simply an exercise where the individuals evaluating the events ask themselves, "If I were under the same stress, with the same level of training and experience, given the same circumstances, would I have made the same (or similar) mistake?

When considering the substitution test, management must consider all contributing factors including (but not limited to) language barrier, clarity of procedure, stress, fatigue, experience, training, family pressure, health or personal conflict with other employees or supervisor.

The goal is to demonstrate fairness, not to excuse the behavior.

If any of the behavioral influences mentioned above (and any others that are identified through the review) are present, then they need to be appropriately recorded for action to be taken to prevent a recurrence.

Note:

Consideration should also be given at this point for whether the person who is involved in the investigation is the one who reported it. Credit (i.e. immunity from consequences) should be given for having the integrity to "self-report" an occurrence.

9. *Defective training or selection experience?*

If management arrives at this box after completing the flowchart, it should be evident that the employee involved did not act in a way that would be expected from a reasonable person. However, management must remember that it was previously determined that malicious intent was not a factor.

Therefore, by default, the problem must be a selection or a training issue.

The Human Resources department is then required to identify a solution.

10. *Negligent error?*

This box indicates simple negligence. By this point in the process it has been established that malice is not a factor. However, reaching this box indicates the employee was negligent in some way, and that negligence contributed to the incident or accident.

In this case, the actions of senior management will require the involvement of Human Resources and the employee's direct supervisor (greater supervision, coaching and training) and the training department (awareness training).

11. *History of violating procedures?*

In order to prevent abuse of this system, a QA check has been implemented.

The philosophy of the QA check is to ensure fair, objective decisions. This obligates management to review each incident in isolation. However, later in the review process, consideration is given to repeat offenders. This is necessary to identify employees who are developing a pattern of behaviour, and have been involved with previous incidents tracked back to the same causal factor,

Senior Management will not only be alerted through this process, but they will also be able to tailor the response appropriately.

If the answer to this box is yes, management must proceed to the QA box titled "Repeated incidents with similar root causes", and review all similar incidents involving the employee.

12. No blame error?

This should not to be misunderstood to mean Cougar has a culture of never assisgning blame or making people accountable for their actions. Rather, if the review of the incident leads to this box it simply implies that the employee simply suffered an incident that was beyond their present capacity to control.

Responsibility lies with management for allowing this situation to develop and corrective action will be taken to prevent a recurrence.

In instances of this nature, individual culpability is very low due to the circumstances leading to the incident.

13. *Repeated incidents with similar root causes?*

If management's review leads to this box, the individual involved with the incident has been involved with other similar incidents or accidents. In order to prevent recurrence, or abuse of this system, a QA check has been implemented which requires the analysis to be redone from the beginning of the process.

The basis for the reassessment is that after an incident has been reviewed in isolation, consideration is given to repeated behaviors, and if applicable those repeated behaviors are reviewed as a whole (no longer in isolation).

For example, consider an employee who is involved with their third incident involving violation of the same procedure. The independent review of each of the two previous cases (in isolation) may lead management to determine the employee did not know or understand the procedure.

However, when reviewed as a group, management will be able to determine more accurately if the employee did or did not intentionally violate procedures.

At the discretion of the General Manager, each repeated offence would constitute a response from management equal to the previous column.

For example, as the above box is found in the fourth column, a second similar incident involving the same employee would imply "Training, coaching and greater supervision" is appropriate.

Logically, the third offence would warrant "Training, coaching, greater supervision" and a "Written warning and negative performance appraisal". A fourth similar incident involving the same employee may warrant "Serious sanctions".

The management of Cougar Helicopters takes repeated failures very seriously. To avoid misunderstanding over repeated events (and a possible inappropriately harsh response) it is important that the user of this tool remember that in order to end up at this box you must have first found that the employee was *not* malicious, reckless or even negligent with reference to this single event. Having said that, if there is a pattern forming it will very likely be indicative of a future performance as well. Therefore, when a pattern has been identified, action must be taken before the next incident might occur.

The goal is and always will be prevention! This management tool provides guidance for to formulate an appropriate management response for the purpose of encouraging reporting and ultimately prevention of future losses. It is not meant to be a "shield" to protect clever or delinquent employees.

The actions to be taken are cumulative. Therefore if you end up at the bottom of the second column ("Reckless violation"), not only is a written warning and negative performance appraisal appropriate, but actions from columns 3 and 4 ("Coaching and greater supervision" and "Training and awareness") are also required.

The Just Culture Decision Tree clearly indicates increasing or decreasing personal culpability as applicable along the bottom of the flowchart. The management response listed in colour coded boxes along the bottom are based on four levels of intent on the part of the employee. These are represented in the four vertical columns, from left to right, across the Just Culture Decision Tree flowchart.

In brief, the four levels of culpability as shown at the bottom of the four columns are:

- "Severe sanction" in response to sabotage or malevolent acts.

- "Written warning and negative performance appraisal" for loss (or possible loss) caused by a reckless (intended) violation of company policy and procedure.

- "Greater supervision, training and coaching until behavior is corrected" for negligent errors.

- "Training and awareness" for incidents that were beyond employee control or systemic errors.

The Director of Safety Management System and Manager of Human Resources provides leadership to the SMS Review committee and/or the senior management team in the use of the Just Culture Decision Tree to determine appropriate actions to prevent a recurrence.

8. Pre-Employment and Random Drug and Alcohol Screening

General Policy Statement

Cougar Helicopters Inc. is committed to the safety and productivity of all operations on behalf of employees, contractors, customers and the communities in which we operate. We recognize the high level of skills and fitness for duty required for safe operation and that the use of illicit drugs and the inappropriate use of alcohol, medication or other substances can have serious adverse effects on these skills, and ultimately on the safety and well-being of employees, contractors, customers, the public or the environment.

This Policy is intended to outline the standards and guidelines associated with alcohol and drug use and possession. Contractors will be expected to enforce these requirements for their contract workers when working on Cougar Helicopters Inc. business or premises.

Pre-Employment

Pilots will be subjected to pre-employment alcohol and drug screening in accordance with CHI's "Letter of Offer" for employment.

Mandatory Disclosure

Pilots, because of their safety sensitive position, must disclose current substance abuse problems, as well past problems or dependency issues with alcohol or drugs within the last six years. An employee who requests assistance for an alcohol or drug dependency problem will not be disciplined for seeking help. However, if justified, the employee may be temporarily removed from a safety sensitive position until an assessment is made by a Substance Abuse Professional (SAP).

Random Testing

All Safety Sensitive positions will be subject to random drug and alcohol testing requested by Cougar Helicopters Inc. on a monthly basis. Further, all CHI employees along with contract workers working at Customer designated safety sensitive work sites (e.g. heliport, aircraft, or vessel) may be subject to random alcohol/drug testing, conducted by Customer personnel or agent, when they report for duty.

9. Emergency Preparedness and Response

Cougar Helicopters Inc. develops individual Emergency Response Manuals (ERM) for each operation. These manuals contain all the necessary contact information for each location, Response Team contact information and Response Team duties. Further, the ERM's from all bases are distributed at the base level with company Dispatch located at headquarters, Operational Control Center holding copies of each for rapid advisement and action in an emergency situation. (See a general table of contents below for a representative sample of the contents of a typical ERM).

ERM Table of Contents

1. First Call - Gathering Initial Information

2. Transportation Safety Board
   A - Occurrence Types

   B - Definitions & Categories

   C - Information Required by NTSB / TSB

Tab A - Accident Report

Tab B- NTSB Aircraft Accident Report / *In-flight Emergency*

Tab C- *Overdue/Missing Aircraft*

Tab D- *Hijacking*

Tab E- *Bomb Threat*

3. A - Command Center Leader Duties
   B - Corporate Staff Responsibilities

   Emergency Telephone Directory

4. Forms
   A - Activity/Communication Record & Log

   B - Emergency Team & Assigned Responsibilities

   C - Serious Injury Report

   D - Deceased Person Report

5. A) Accident Investigation Team
   B) Care & Comfort Field Team

   C) Media Response Team

6. Operational Debriefings

7. Emotional Health Service

8. General Rules of Conduct for all Employees

9. Aircraft Data Sheets

10. Dangerous Goods Shipping Occurrence

11. Family Response Center

(Employee's Families)

Media Response Center

Emergency Response Exercises

Emergency Response exercises will be carried out periodically to test our effectiveness at responding to an emergency. Three types of exercises are held:

1. Pre-planned exercise. Everyone is informed before the exercise is planned.

2. Pre-planned, simulated. Only the top managers are aware of the exercise. The scenario is identified clearly as an exercise to employees.

3. Pre-planned actual. Only the top managers are aware of the exercise. The scenario is not identified as an exercise to the employees.

Only by believing we are responding to an actual emergency will we be able to fully test our system and eliminate any deficiencies.

Following all exercises, an operational debriefing will be held. Shortfalls or findings will be identified and corrected as soon as reasonably practical.

All exercises are normally coordinated and planned by the DSMS, Safety Coordinator and BASO.

The goal is to conduct at least one exercise per year at all Cougar operations, including start-up operations. After each exercise, the accident response plan is revised as necessary by the DSMS, Safety Coordinator and BASO on the advice and agreement of the management team.

10 Safety Management System Measurement and Improvement

Continual improvement and exemplary service to our customers is a core value. We must all strive for improvement.

Cougar Helicopters Inc. Safety Management System is a living set of processes that must be monitored, measured and improved on an on-going basis. The DSMS will ensure the materials

contained in the system are both audited and improved where applicable to ensure its effectiveness for the company.

SMS Measurement

Safety performance must be measured in order to be managed. Cougar will utilize Key Performance Indicators (KPI), Leading Indicators, surveys, safety statistics and any other methods that can provide quantitative and qualitative improvements to safety.

Key Performance Indicators

It is the company's intention to expand and develop Key Performance Indicators ("KPI's") that will amongst other criteria measure and report processing times, the frequency and regularity of safety meetings, the documented analysis of our own accidents and incidents, as well as those of other operators.

KPI's and targets are established and will be used as initial benchmarks upon which to gauge performance. Key initiatives will be sought out at all times and implemented into the SMS to proactively improve the system.

These indicators include the requirement of reporting as well as the timely investigation of occurrences, the frequency of Safety Meetings, both from a base and managerial perspective, and the process for distributing the findings and recommendations.

Monitoring Safety Performance

The monitoring of safety performance is a line management responsibility. As part of providing care for its staff and customers and pursuant to the managerial responsibilities specified within the SMS, the routine monitoring of the respective workplace is undertaken constantly. Safety audits are essential components of the Safety Management Plan. They review systems, identify safety issues, prioritize safety issues, must involve all personnel, and enhance the safety of operations.

Within Flight Operations, Quality Assurance is attained through the use of company Check Pilots who audit pilot practice versus published procedures as well as internal flight operation audits conducted by the Director of Flight Operations and Chief Pilot.

Our Quality Assurance Department (Maintenance) has a very thorough set of standards and audit protocols to ensure the monitoring of processes and practices within engineering, and they can be

referenced within the Company's approved Maintenance Control, Policy and Procedures Manual.

Safety Audits are also carried out by the Safety department to ensure each location or base receives an annual inspection.

It is accepted that all levels of management must fully support the continued development of a just culture within the organization, and that this will stem from sound leadership and from motivation of staff.

Data will be drawn from the company Event Reporting Database, in order to show trends both positive and negative with regard to various classifications contained therein, and to help establish targets in areas of concern.

Tasks which Cougar undertakes to assist in measuring and improving the Safety Management System include:

- Conducting an annual review of the SMS and implement change as appropriate.
- Reviewing the Safety Policy and implement improvements/changes where necessary.
- Reviewing the Safety Plan and Strategic Objectives for outstanding items that require further attention or resources.
- Reviewing the Audits Internal / External to ensure follow-up action and completion.
- Reviewing the Key Performance Indicators established by itself to determine if organizational targets are being met.
- Monitoring safety performance to generate feedback needed to improve the system.

We must also understand that the responsibility to improve the SMS lies with every employee of the company.

By using the SMART approach (Specific, Measurable, Achievable, Results orientated and Timely action) the SMS will foster and grow in a generative direction to ensure the safe operation of our entire company.