OFFSHORE HELICOPTER SAFETY INQUIRY
February 2, 2010
Tara Place, Suite 213, 31 Peet Street
St. John's, NL

February 2, 2010

PRESENT:

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Anne Fagan.....Inquiry Counsel

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..... Petroleum Board (C-NLOPB)

Cecily Strickland/Ian Wallace..... Hibernia Management and
..... Development Company (HMDC)

Denis Mahoney/D. Blair Pritchett.....Suncor (Petro-Canada)

Alexander C. MacDonald, Q.C./
Stephanie Hickman.. .....Husky Oil Operations Ltd.

Laura Brown Laengle .....Government of Newfoundland and Labrador

Norman J. Whalen, Q.C./ Michael Cohen.....Cougar Helicopters Inc.

Jamie Martin.....Families of Deceased Passengers

Kate O'Brien. .....Davis Estate (Pilot) and
..... agent on behalf of Douglas A. Latto for Lanouette Estate (Co-pilot)

V. Randell J. Earle, Q.C. .....Communications, Energy and Paperworkers Union
..... Local 2121

David F. Hurley, Q.C. ..... Offshore Safety and Survival Centre, Marine Institute

Mark Freeman .....Department of Transport Canada

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COMMISSIONER:

Q. Good morning, ladies and gentlemen. Ready, Ms. Fagan.

MS. FAGAN:

Q. Yes, Commissioner. Today we are going to have a presentation from Cougar Helicopters Inc. I anticipate that it will take today and tomorrow, or at least a portion of tomorrow to present their direct information. We have three presenters on behalf of Cougar Helicopters and I'll have them all introduce themselves. The first presenter is Rick Burt, and he is the General Manager of Cougar Helicopters Inc., and Senior Vice-President Oil and Gas of VIH Aviation Group, which is the parent company. We also have Mr. Hank Williams, who is the General Manager East Coast for Cougar Helicopters, East Coast Canada. We have Richard Banks, who is the Director of Safety Management for Cougar Helicopters at the St. John's base. I would ask that each one of the witnesses be sworn.

MR. RICHARD WAYNE BURT (SWORN)

MR. BRADLEY HANK WILLIAMS (SWORN)

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MR. RICHARD DANIEL BANKS (SWORN)

MS. FAGAN:

Q. Before we begin the presentation, I would like to have the exhibits entered, and I'll just explain what the exhibits are and the numbers for the record. There is a PowerPoint presentation which is Exhibit 155. There are also two videos. The video -- one video which is a production that was prepared by Cougar Helicopters to assist this Inquiry and to give us a virtual tour of what Cougar Helicopters do on a day to day basis. That is Exhibit 156 and it's in six parts because we will play that in segments and deal with questions after each segment. We also have another video which is Exhibit 182, and that exhibit is the pre-flight safety video which is played prior to the boarding of the helicopters for the passengers to view. In addition, we have a number of pamphlets and company records. So the exhibits will run from 155, the presentation, through to 182, which is the pre-flight video. So if they could be accepted as exhibits, we can then have the public exhibits posted on the website. I note

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that in that group of exhibits there are some confidential exhibits which won't be posted on the website. They consist of company manuals and company documents which are proprietary. What will be posted are a number of pamphlets, certificates, the videos, and the PowerPoint presentation. Before we begin the PowerPoint presentation, I understand Mr. Burt has a opening statement.

COMMISSIONER:

Q. Good morning, Mr. Burt.

MR. BURT:

A. Good morning, Commissioner Wells. I'd like to thank you for the opportunity of coming here to speak today and through these days, and I'd like to make some opening comments. The events of March 12th changed my life forever, there's no doubt about that, and I, like many Newfoundlanders, have been profoundly affected by the events, and I can only imagine what the families and friends have been going through as they've been going through this struggle from the events, and I just wanted to offer my condolences and my deepest sympathies to the families. Also I found it quite profound, Mr.

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Decker's statement and testimony. I think it took amazing courage for him to come and speak in the way that he did. I'd like to thank him for his openness. For me, it was very, very impacting. Cougar Helicopters too lost a lot of friends on March 12th. It was a pretty devastating day for our organization, there's no doubt about that. In the nine months since that point there's been a time of healing, reflection, and review of everything that's happened, and this process, I think, is essential to continue on with that. I just want to say our organization is an organization that embodies a safety culture, it's basically embedded in everything we do. It starts with the leadership, it starts with me, it starts with Mr. Ken Norie, the owner, and this proactive approach to our safety culture is embedded in everything we do. I'm very proud of that. It defines us as a company. So these proceedings are definitely a complement to that and I just want to say that we're here to cooperate and to complement this in any way possible.

COMMISSIONER:

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Q. Thank you.
EXAMINATION BY MS. FAGAN:
MS. FAGAN:
Q. Thank you. Now we have a PowerPoint presentation, but before you introduce your PowerPoint and we start to go through the sections, I would like you to give us a brief description of your history, work experience, your background, and I would also like Mr. Williams and Mr. Banks to give us that information because it will give the group here who are eventually going to ask questions, as well as those viewing, a context in order to know what your background is, what your experience is. So Mr. Burt, could you start with your background.
MR. BURT:
A. Certainly. Currently my position is the Senior Vice President of VIH Aviation Group, and that's the parent company of Cougar Helicopters. I also hold the position as General Manager of Cougar Helicopters, and that's a global entity now. My beginning, I started here, I'm from Newfoundland, grew up on the island and graduated high school at

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John Burke High in Grand Bank, and then proceeded towards the beginning of my career. Not quite hold enough to get my pilot licence, I did one year in university here until I could. I did my training here with a company called Sealand Helicopters. Many may be familiar with that, the predecessor of CHC. I did my basic training here in St. John's. I went on to in 1979 start my flying career as many pilots do in the helicopter business. Of course, I trained on helicopters. I hadn't flown any fixed wing or airplanes at that time, and flew on the island and Labrador for a couple of years, and shortly thereafter moved into a new market that the company was developing, and that was the IFR offshore market.
MS. FAGAN:
Q. What do you mean by IFR?
MR. BURT:
A. IFR is a term that we used in the aviation business to describe the nature of the flying. It's Instrument Flight Rules. So it's like flying in an airline environment where you're flying on instruments and in inclement weather

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and bad weather, so you can fly in the clouds, and it was kind of a different kind of flying than I was doing for the first two years, flying forestry in a jet ranger type of aircraft, flying wildlife here on the island and that stuff, so it was a new and different type of experience for me and that started in 1981. At that time the company was flying in Labrador, flying offshore for Petro-Canada, in Halifax flying offshore there as well, and I began my career as an offshore pilot and came up through that process whereby I also got involved into the safety department, the training department, and in 1982 became a captain on one of the Super Puma aircraft flying off of St. John's. I moved on then to become the company safety officer in September '85, between that and August of 1986, and helped develop many of the procedures and got involved into the management of the company at that time. About 1986, I was flying offshore and in 1986 the business slowed down here. The offshore was in the exploration mode at that time, and wanting to stay in this region and wanting to stay in Atlantic Canada, I then

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trained for and completed my fixed wing training, and went over in 1986 and worked for Air Atlantic in Halifax for a year and we flew the Dash 7 and the Dash 8 aircraft there in a regional commuter basis. One year later, I was approached by -- at that time the company was moving over to now becoming CHC, and in 1987 they asked me to come back to St. John's and take the chief pilots position, and again this is now going back to the rotor wing IFR offshore environment here in St. John's. I came back here, accepted the position of chief pilot and -- from 1986 to 1989, and while I was here, we not only had the responsibilities of flying offshore here, but I was also a offshore line captain, I was flying at that time. I was an approved check pilot and that was a designated position by Transport Canada to fly with pilots and renew their licences and to do aircraft type checks. So we had a bit of a multi-role capability at that point, and we also were -- I was also responsible for our operations in South America. We had crews flying Super Pumas in the jungle in Ecuador and we would go in there with three aircraft

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and I was supporting that as well. Shortly thereafter we had another cycle in our business here because we were still in exploration in 1989, and again I didn't want to leave the area, so I went over and started employment with Air Nova and that was based out of Halifax at that time. It was an interesting two years I spent there from '89 to '91, flew the BA-146, the four engine jet that they had there, and I flew throughout Atlantic Canada and charters to the States, and that was an interesting time because I completed then my airline transport rating for a fixed wing aircraft, and for me that was a big goal in my career to do that. So now I was basically compliant and fully capable in both fixed wing and rotor wing from an airline transport point of view. In 1991, I moved over to Cougar Helicopters, and that's really where I started with Cougar, and came over as the chief pilot with Cougar, and again took over a lot of my knowledge from the airline business and developed some special procedures there under that role, and we were working in Halifax for Lasmo at that time and that was

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the first offshore oil production operation in Canada, and continued on there until 1996. Back up a little bit, in 1993 we started the process of bidding for the Hibernia contract and that was through a Request for Proposal process, and I was the Hibernia bid team leader. With the experience I had in St. John's, that's the reason while I had this. So we bid that contract and fortunately in 1995 we were successful and I was the author of my own destiny, and in 1996 I moved my family back to St. John's where we started preparing for the beginning of the Hibernia contract. Then in 1997, we began operations with Hibernia and started here with three aircraft and that was an opening of a new chapter for sure in my life and life here with my family. From that point on, we developed that work, we brought on different customer -- a larger customer base here, and then as time went on, in 2003 -- actually during that process I came over here as the base team leader and that was my initial point. I was flying offshore here still quite actively and transitioned to a role of VP for Newfoundland

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and Labrador for Cougar Helicopters. In 2003 there was a significant change in our operations. We were -- the company was in a friendly manner taken over, purchased by the VIH Aviation Group, and at that point in 2003 I was asked and accepted the position as General Manager of Cougar Helicopters, and, of course, that position was still here in St. John's, but it was more from a corporate role and a commercial and business development role, and also a little bit broader than just St. John's. I continued on in that role still actively involved in the offshore, still holding my licences, and still flying, and then some two and a half years ago now in 2007, I was asked to go to Victoria which is the head office for VIH Aviation Group and take the position as the Senior VP of Offshore Oil and Gas for the Aviation Group, and the reason for that is that our company was now in a major global footprint, and they wanted to bring me out there to help support that effort as we were moving into markets in China and Australia, South America, Alaska, the Gulf of Mexico, and St. John's. Since that point I've

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been in Victoria. I still do hold the role as General Manager of Cougar because we are a global company now as well, but I'm responsible in this capacity now for the vision, the business development of the group of companies, not just Cougar, but all the companies, and primarily looking at focusing on our development of our market and the growth of our company. That's where I sit here today.

MS. FAGAN:

Q. Thank you. That, I think, will be very helpful for the group and when they're asking questions, they'll know where you were at the time when they're focusing. Now, Mr. Williams, I understand you're the General Manager for East Coast or Canada East. Could you please give us some of your background and experience so that the group will also have a context.

MR. WILLIAMS:

A. Okay. I guess I'll start off by saying I'm originally from Triton and as most Newfoundlanders, my first pay cheque came from a fish plant back in Triton, but I want to

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start with 1990 is when I moved to St. John's. I came into St. John's as a result of -- basically moving because of a disability my son had and needed to be St. John's, and started to look for employment. I was fortunate in 1990 to get hired by the Pike Group of Companies, the owner, Roger Pike, of course, basically as Operations Manager for all of his ground transportation activity, but also Air Labrador being a part of that Pike Group of Companies was my first taste of aviation, and I guess most people say once you get the first spell of jet fuel in your nostrils, it's hard to do anything else. So I really became very interested in aviation and from that point of view. I did that for three years and then moved on to work with Hudson General Aviation at the St. John's Airport. Hudson General Aviation was providing ground support services to Canadian Airlines at the time and a bunch of other airlines. I got very involved in ground activity, ground support, and the logistics around working aircraft while on the ground. I did that for a couple of years and I then moved into some

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self-employment opportunities where I had some various contracts, and in 1996 I had, I guess, a chance meeting of Mr. Burt. I think I banged into his literally at the airport, where we got into conversation and found out what Rick did with Cougar Helicopter. It sounded very interesting and they had just won the Hibernia contract, and again very interesting. I think the first night I had a conversation with Rick, I probably spent eight or ten hours on a computer learning about Hibernia, what they were, what they're all about, and Cougar Helicopters. So very interesting. So during my thought process of knowing Rick, meeting Rick, we became engaged in would I be interested in a position with Cougar Helicopters as they started the Hibernia program. Of course, very interested. So in 1997, February 13th was the date in 1997, I became a Cougar employee. My position was a title of Passenger Movements Coordinator at the time, and that was in very, very close liaison with the Hibernia Management Team and the logistics folks there of developing procedures, processes around managing

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passengers, and more specifically the implementation of a POB System, Personnel on Board, because one of the prerequisites of operating there was we needed to establish a system that accounted for individuals being on a platform and the prerequisites for being there. So I guess the first major role that I played in this offshore oil and gas industry was in conjunction with Hibernia was in the implementation of the POB System and establishing the procedures for movement of passengers, security, and cargo to and from offshore locations. In 2005, I got a promotion to Base Operations Manager. When I moved into the Base Operations role, I got more involved from the day to day operations as well as the business and commercial side of the activity at Cougar. I learned a lot from Mr. Burt and my predecessor on what's involved in an operational environment to manage helicopters, to manage an operation the size of ours, and working very closely with our department heads, our Director of Maintenance, Director of Flight Ops, and our safety systems, but was the Base Operations Manager

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responsible for basically the contract delivery. What we had committed to do to our oil companies and provision of services to making sure that that was done safely and efficiently as possible. That ends up to my present role, which is relatively new. In 2009, I was appointed as the General Manager for East Coast Canada with the provision of general oversight of the contracts, operations, and the commercial and logistics side, not only for St. John's, but we do have an operating base in Nova Scotia as well, and as Rick referred to yesterday, I think, it was points north he said, points north. So that brings us today where I'm the General Manager for Cougar Helicopters. I will say I'm part of a big team at Cougar, and with the Flight Ops Department and the Maintenance Department and safety team, we operate a team at Cougar and I try and support that as much as I can and provide as much oversight as I can.

MS. FAGAN:

Q. Thank you, and now to Richard Banks, and could you please give us some information on your background.

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MR. BANKS:

A. Sure. My name is Richard Banks, currently the Director of Safety and Quality, ISO side of the house for Cougar Helicopters globally. In 1980 -- I'm from Toronto originally. In 1980, I joined the Canadian Armed Forces, Air Force Division, serving 22 years as a search and rescue specialist, primarily fixed wing and helicopter operations, parachute rescue missions, dive operations, hoisting operations in mountain rescues across Canada and into the States, and I did also serve a few bases as a flight safety officer and liaison to the Flight Safety Division in Winnipeg. After 22 years, and spending nine years in Gander as a search and rescue technician, and falling in love with Newfoundland, I had the opportunity to be asked to join the Cougar team as a rescue specialist. So in 2002, I took the offer and ended up working as a rescue specialist with delving quite heavily into the safety management side of the house with Cougar. I was a good liaison to assisting the development of the safety management systems as well as certify the company in ISO

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9001:2000, and as we fostered and grew that, I left the rescue position and went into Manager of Safety for the company, or company aviation safety officer position as Transport Canada would call it. After a couple of years of that, in 2006 I took up more development with the safety culture of the company and fostering our programs and development and initiatives within the aviation industry, helicopter primarily. I was promoted to Director of Safety and Quality. ISO has changed from ISO 9001 to 2008. We hold that current certification now, and just the fostering of that across all of our bases of operation was my main goal, to take everything that we had learned and built here and developed to move it to all of our operations so that one standard exists throughout our whole fleet. My education includes, as I said, flight safety officer training throughout the military, notably aviation safety management, certifications from Southern California Safety Institute, as well as health and safety certification through University of New Brunswick. I also serve as

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co-chairman on the Helicopter Association of Canada, that's the HAC, and also I'm the liaison for the international safety team, helicopter safety team, and here I am today to give you some insight into our safety management systems, how we strive to go ahead of the industry in many facets, and how we are moving forward in the future.

MS. FAGAN:

Q. Could you just explain what the international committee or group is, the organization, and the helicopter organization, those two committees, one where you said you were liaison and the other where you said you were co-chair? Could you tell us who or what entities make up those committees or groups and what their purpose or mission is?

MR. BANKS:

A. I'll start with the Helicopter Association of Canada. That's a Canada based, largely from the western provinces. They've put together a huge committee where helicopter operators of not just the oil and gas, but land based, heli-skiing, everybody gets together and they meet once a year to bring new ideas and -- new

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developments and ideas, I guess, to the future of the safety and the air taxi, and every facet of helicopters within the industry. There's a lot of players that come from the States as well. Internationally, it does have some players, but mostly Canada, and it's a team effort in the industry in providing more safety to the future of helicopter operations in Canada. The international helicopter safety team, now that's a global worldwide situation where everybody has a say in how we want to move ahead with safety in the helicopter industry, but taking best proactive learnings from all parts of the world and piecing it together, and significantly reducing the risk in the past couple of years that it's been formed. Like I said, I'm a liaison to that, but it's a big sharing practice of everything that's happening now and as we move forward. Any new initiatives that come out are generated quite fluently and all the companies can pick up on smaller things to help educate their people as well as gain a very just culture within the helicopter divisions now.

MS. FAGAN:

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Q. Thank you. Now I would like to move into the PowerPoint presentation, and as mentioned earlier the presentation is in segments. Mr. Burt is going to take us through the first segment. You will note there's some -- this is a corporate overview and some history. We've heard some of the history, so Mr. Burt is going to touch upon the high points from a corporate perspective, and there are segments where both or all three panellists will give information, but for this first section it will be lead by Mr. Burt. I understand you're going to control the slides.

MR. BURT:

A. We're going to try.

MS. FAGAN:

Q. All right, well --

MR. BURT:

A. I just want to start off as we do in any of our meetings with our senior leadership team to remind ourselves and anybody that we're talking to, everything we do in every aspect we run our credo through here when it talks about safety, so it's appropriate to run it through here and if I could, I'd like to read

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this statement that Mr. Ken Norie, the President and owner, has made sure that we all understand. It says, "No operation or business opportunity, either new or ongoing, should ever compromise safety or unduly affect our accepted levels of risk in the VIH Aviation Group of Companies", and that's important for us because that's the glasses, that is the culture we look through everything through. So I just wanted to basically set that tone as we corporately do on a regular basis. From a corporate overview point of view, I just want to go into a description of the history of our organization, the VIH Aviation Group of Companies, as the oldest privately held company in Canada, it started in 1955, and had a couple key dates beyond that, of course. In 2000, Mr. Ken Norie ended up taking over full control of the VIH Aviation and he currently is 100 percent owner and the president of that organization today. They entered the offshore oil and gas market from an onshore point of view in 2001, and the key date of 2003 was when they acquired Cougar. Now Cougar's specialty, as we talked

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about the IFR, or the Instrument Flight Rule, offshore aviation market and that is our specialty, and they did, as we said, in a friendly manner take over Cougar in 2003, and I was involved quite instrumental in that process as well. From that point on, we have as an entity thrived, there's no doubt about that. However, as the VIH Aviation Group has progressed, we developed markets of search and rescue both domestically and internationally. We entered into a global marketplace in 2007 in Australia. We were in Alaska actually the hear before in 2006, and we have continued to proliferate our presence in the United States as well, both under NAFTA and also through a joint venture of a sister company called VIH Cougar.

MS. FAGAN:

Q. Now NAFTA, I think most of the group may know, but just for the record, could you indicate what NAFTA is?

MR. BURT:

A. Yes, it's the North American Free Trade Act, and under that, the aviation business operates under a operating specification and there's an

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allowance through specialty air services of that agreement to provide services in the United States. Some of those services from an aviation point of view are aerial photography, specialty air services like we supply, there is seismic operations and typically those operations will be supplied where you're really not carrying passengers, essential crew, but not passengers, and we have been doing that since our initial entry into that marketplace.

MS. FAGAN:

Q. Okay, thank you.

MR. BURT:

A. Continuing on, we also participated in a couple other global arenas. In 2008, we took Super Puma -- sorry, the S-92s and some other aircraft from our sister company, VIH Helicopters, six of them, in fact, in 2008 and participated in the first free elections in Angola. That was an interesting part of our history as well. Just recently in 2009, we purchased 50 percent interest in HNZ Helicopters out of New Zealand, and particularly their Australian offshore oil and

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gas support company. So we are involved now in Australia as well, and that was our latest development.

MS. FAGAN:

Q. Thank you. Now you've mentioned the VIH, and I understand your business is divided, so I believe you have a slide coming up where you have just an overview of the services and how you've divided or organized the company.

MR. BURT:

A. Okay. The VIH Aviation Group of Companies is essentially, as we talked about, the IFR, although that's not a term -- that's a term that we've used in our business to separate the two. There's an IFR and a VFR. IFR again is the Instrument Flight Rules, and that's typically associated with the airline offshore flying in harsh weather division, and the VFR is the utility type aircraft, the lighter, forestry, wildlife, Visual Flight Rules, the VFR side of the house, and that's how we've divided the divisions in our organization. As far as those entities goes, the IFR offshore has 17 aircraft and the VFR has 57 aircraft. We also have a fixed wing division, it's a

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corporate division with two fixed wing aircraft. Our customer base is made up of major international oil and gas companies. That's the IFR Division. For us we, as an organization, what has really benefited us is that we have a very broad-based capability now, we're very diversified, we're a global entity. We find that we have elements of business that will work in this season with a certain group of aircraft and those aircraft can move over to another type of business. So it does help take some of the peaks out of the aviation business which comes and goes, but that diversification and the larger fleet base has really served us well.

MS. FAGAN:

Q. You had mentioned your customers. It's already part of the record that you provide services to Suncor, Husky, and ExxonMobil or HMDC.

MR. BURT:

A. Uh-hm.

MS. FAGAN:

Q. And I believe there may have even been mention of Statoil. Are there other oil companies

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which -- not necessarily east coast of Canada, but are there other oil companies that you provide services for?

MR. BURT:

A. Sure. We currently provide services for Shell Oil, we provide services for BP, Statoil in the Gulf of Mexico as well. Internationally, we're flying for ENI, an Italian oil company in Australia, and we are flying in Halifax, of course, right next door for a major customer, Encana. That makes up the brunt of our customer base.

MS. FAGAN:

Q. Thank you. Now where are all these bases? I understand -- you've mentioned a number of countries and I believe you have a chart which shows where the VIH and the various operations are located. So can you explain this?

MR. BURT:

A. Sure. I mean, I'll speak to the existing bases that we have and maybe even touch on some of the recent operations we've had. Our main bases, of course, let's start right here in St. John's, near and dear to us, of course, and in Halifax, we have a substantial presence

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in Halifax, and ironically, that was our roots, of course. Moving out west, in Victoria is the head office, but we do have a substantial presence there. The Gulf of Mexico in Louisiana, actually in Galliano, we have a fairly substantial facility there, just brand new state of the art that is supporting our operations in Galliano. We also are in Australia, as we mentioned, in Perth is our head office and we've operated in various locations such as Darwin, as far north as Darwin in Australia. Outside of that, we continually on a seasonal basis operate in Barrow, Alaska, and that's providing search and rescue. We have had multiple years, multiple seasons in Tuktoyaktuk in the North West Territories operating for both Shell and BP. We have other divisions working in Peru, and again that's a support, albeit in the VFR division for oil and gas onshore. We talked about -- we've worked in Angola, and also in Taiwan. We're doing some heavy lifting operation under the VIH Aviation Group in Taiwan as well.

MS. FAGAN:

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Q. Thank you, and we have a couple of slides on the -- on how the company is organized, and you need not spend too much time on that. I know you didn't intend to, so could you just explain this slide and then move into the next one?

MR. BURT:

A. Sure. I think the points of this slide would -- we've talked about the operating companies, the companies that fly aircraft, the HNZ Cougar now in Australia, Cougar Helicopters. VIH Cougar is the US company, and VIH Helicopters is the utility or VFR company. What we didn't touch on here is that underneath this group of companies we also have VIH Aerospace, very significant, this is a repair and overhaul entity in Victoria, British Columbia, where all of our aircraft can go in there and get overhauled, deep overhaul, and we also develop our kits, specialized kits, for aircraft, and this is pretty high tech leading edge capability of designing kits that are tailored to our business and proliferating our core business. An example of that is that we would put a

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forward looking infrared radar into our aircraft and we would build that capability into an aircraft and have it certified. So it's a key element, and we're also now moving on to extensive repair and overhaul of major components and moving towards the S-92 overhaul capability.

MS. FAGAN:

Q. When you say "certified", the forward looking infrared --

MR. BURT:

A. Yes.

MS. FAGAN:

Q. Who would certify that type of device on the aircraft?

MR. BURT:

A. Our engineering department, based upon the operation's needs, would say we need to operate this equipment in Canada or the United States, or internationally, for that matter, and we would seek the certification in either Transport Canada or the FAA, which most of them are always certified, and then internationally in some cases we would go to the European area and have them certified

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under that authority under EASA because you do have to have them individually certified under the countries that you do fly. So we seek those certifications and we receive them. It's quite an onerous process, but we've got some very capable people as we've learned how to do that.

MS. FAGAN:

Q. Thank you. The next slide is senior management team, and I think it helps explain some of the reporting, who reports to who, and in particular, the Director of Safety and the Manager of Safety, how do they fit into the reporting schedule?

MR. BURT:

A. Sure. Again from a VIH Aviation Group, the President and CEO is Ken Norie, and underneath him sits a number of Senior Vice Presidents, including myself, and those group of people provide the vision and business development strategy and the corporate overview of the organization. We have decided and the way we structured, all of our operating companies have general managers, and in the case of Hank Williams here for Cougar, and those people are

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responsible for the commercial business development, logistics, financial operations of those entities. Now one reason -- a very important reason we have put the Director of Safety and Quality, Mr. Banks. His position is on the slide because all aspects and all levels of all of our org charts, you will see that this position is crucial. Rick has -- Mr. Banks has a responsibility to report directly to the accountable executive, and that's Mr. Ken Norie. So you'll see that on everyone of our org charts. He has a reporting line as well to myself, as the Senior Vice President of Offshore Oil and Gas, but again his responsibility is strictly to the President and the CEO with a direct line.

MS. FAGAN:

Q. So your Director of Safety reports directly to the top or the head of the company?

MR. BURT:

A. To my boss.

MS. FAGAN:

Q. Okay, thank you. Now that is the VIH Aviation Group, but as you've said, a part of that group is Cougar Helicopters, and you've given

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some of the information with respect to Cougar. Could you move to the next slide and just hit upon some of the high points where there is significant events because many of these events you've spoken to or touched upon earlier?

MR. BURT:

A. Sure. Now we're speaking about Cougar Helicopters itself. Cougar was formed actually in 1984 in Halifax and one of the key dates there, of course, is when we started flying offshore in Halifax on a long-term job and that was 1990 with Lasmo, later becoming PanCanadian EnCana, and the only other one I'd like to sort of stop on there is that we were awarded the first Canadian civilian search and rescue contract in Yarmouth, Nova Scotia and we performed that work from 1991 to 1994. It was there we really cut our teeth and we gave sort of birth to this search and rescue expertise, and that's where it started, because we'll be speaking about that later on.

MS. FAGAN:

Q. So when you -- do you mean to say that this was the first Canadian -- the first time a

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civilian SAR operation was awarded to a -- in Canada, it was a civilian, not a military?

MR. BURT:

A. That's correct, yes, and we were very successful, had a number of quite tangible rescues on that operation. One job alone we saved ten lives on that operation.

Of course, the award of the Hibernia contract for us was a major, major development for our company in 1995, and then we talked about several awards of the Petro-Canada, now Suncor, contract and Husky and then lately, in 1992, we introduced the S-92 to the market and in 2005 to present, we started our operations in the Gulf of Mexico and for us, that was our first venture on an international basis as we moved abroad, and as I talked about earlier on, we've also now gone into the Australian business. We have proliferated our St. John's business presence here, of course, with other operators, such as Chevron and Statoil and we've recently just introduced the S-92 to the Gulf of Mexico and that was, for us, a major development there as well.

Maybe the last little check on the box

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was we recently brought under our umbrella the BC Air Ambulance, the Bell 222 aircraft that's supplying the medical services in that province as well.

MS. FAGAN:

Q. Thank you. Now the Cougar Helicopters operation, what is the current fleet size and the type of service you provide? And I understand you're going to touch a little bit on the type of SAR, search and rescue, you provide.

MR. BURT:

A. Right. As I mentioned, we have -- currently have 15 heavy helicopters, eight S-92s, six S-61s and one S-76. They're all Sikorsky aircraft. The 76 is a medium size aircraft, so just to be clear. The rest are large and this is a medium aircraft that we have in Halifax. Our primary role is to provide, as we talked about this, IFR offshore service to the oil and gas industry. If you will, it's similar to an airline service that we would supply offshore. A transport category it's called, airline category of operations. Very structured, scheduled trips, and we use a lot

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of the same types of systems you'll see in an airline. We do primarily crew changes of offshore workers that go on a rotation offshore back and forth and we do, however, in some locations provide search and rescue. Now we do it in a dedicated fashion in some locations. That's all we do. We'll also do a hybrid where we'll do search and rescue and passengers. So it depends on what location we're working in. But more often than not, the search and rescue component is being required.

We do have a bullet here on offshore aerial construction. It is a niche business and we'll speak to that a little bit later on when we talk about synergies of the company, but that essentially is lifting flare tip units, and this is the tip that goes on the oil rig that flares off gas. It has to be changed out. We do that specialty change ourselves using the VIH helicopters, aerial construction specialists, combined with the Cougar people, and as I say, we can touch on that a little bit more later on.

We talked about our operating regions.

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Right now, it's basically global, but east coast Canada, Gulf of Mexico, Arctic Rim and northern Australia.

The search and rescue, I think it's important to understand how this has become a core part of our business, and essentially you almost have to roll in another part of that. So what we focused on is what are we good at as a company. It was very important for us to understand that. And what we are good at is flying long distances in challenging environments, harsh weather environments, cold weather and high winds. That has really sort of defined us. In fact, we were invited to go to the Gulf of Mexico to provide those services after one of the major hurricanes there, as they were looking for a harsh weather specialist to provide search and rescue services.

Now in that service, it's not just that we would go out with a hoist on an aircraft and rescue people and search and rescue people, but we also provide a medical, a medical evacuation, emergency medical evacuation service as well, where we would go

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out, pick up an injured worker, sick or injured worker. We have stretchers on board our aircraft. We have support equipment to effect that extraction and some specialists on board. We do work with our own teams. Somewhere in the world we also have our own paramedics and we also work here like in St. John's with AOMS where they bring their specialists on board and we do effect those rescues as well.

MS. FAGAN:

Q. If you had to give a percentage or breakdown of this business, how much of this business would involve flying over water?

MR. BURT:

A. Our over water flying would probably compromise about -- be comprised, I should say, of about 97 percent of all the flying we do. Yeah, we don't get to sightsee too much.

MS. FAGAN:

Q. Okay, thank you.

MR. BURT:

A. But we do see a lot of whales.

MS. FAGAN:

Q. We have a slide here which is the -- I guess

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just a breakdown of Cougar Helicopters and I would just like you to explain this slide briefly and then we have another organization chart that deals with the reporting for Cougar.

MR. BURT:

A. Sure. This just gives some insight to the operating companies that make up Cougar. The VIH Aviation Group, we've talked extensively about that. Well, Ken Norie is the director and president. He's also the 100 percent owner of this company and that's the parent holding company. Cougar Aviation is the holding company of Cougar Helicopters and Ken Norie is the director and president of that entity. Cougar, as we spoke about, Cougar Helicopters, again Ken is the director and president. We're the commercial air carrier. We do the flying, and again, as just part of the way we do our business, we also have a company called Cougar Properties and it's a real estate holding company. For example, our facility here in St. John's is owned by Cougar Properties and that's Ken Norie as the director and president of that entity.

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MS. FAGAN:

Q. Thank you.

MR. BURT:

A. You're welcome.

MS. FAGAN:

Q. Now the next slide, which is a reporting slide, can you go through the significance of this slide? And I note at the bottom, it has a reference to Transport Canada reporting responsibility. So I understand in the aviation world, an aviation company is a specialized company. It's regulated by Transport Canada and there are certain reporting requirements and I believe that's why you've put this slide in, so that we can understand how you're regulated and how some of these positions, such as Mr. Banks, is significant from maintaining your compliance under the regulations. So can you go through this slide and explain how all that works?

MR. BURT:

A. Sure. You're absolutely correct. The aviation business is a highly regulated business. Transport Canada is very specific about the positions that they require for an

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operator to hold an air operator certificate. They actually not only cite that they are important, but they will describe what those positions must do. They then will ensure that whoever fills them passes the proper test, the career years experience and an interview to get those positions.

MS. FAGAN:

Q. So who conducts the interview and the test or exam?

MR. BURT:

A. The interview, of course, is with Transport Canada. It's a very -- a great deal of oversight, especially when you're determining who's going to be the key entities, and those entities are who's going to be the director of maintenance, which is a Transport Canada stipulated position, the director of flight operations and also the director of safety or the company aviation safety officer, as Transport Canada would describe it. Those are the key positions, but even the positions below them are Transport Canada mandated positions, such as the chief pilot, and I myself have gone through interviews for these

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positions with the chief pilot and director of flight operations, and again, you have to provide a CV with the years in the business. You have to sit with the inspector, write an exam, do an oral exam, and make sure that you have a thorough understanding of the Canadian Aviation Regulations to achieve these positions.

So it's very important for the general public, somebody who's not involved in our business, to understand these positions are absolutely mandated by Transport Canada and highly specified as to what they do. So one of the things I would like to point out about this, however, is that the president, Mr. Ken Norie, is designated as what Transport Canada would call the accountable executive, and he is the person responsibility for the organization, ultimate responsibility, and in the case of Mr. Banks, he has a direct reporting. His position again is a Transport Canada position. He has a direct line reporting to the accountable executive. That person, that go-to person, and I think it's quite significant. On this description,

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you'll sort of see that little sidebar, that little business description, how I would fit into it, and Mr. Williams would fit into it, but the key message on this slide is to understand the Transport Canada relationship and the requirements of a highly regulated industry.

MS. FAGAN:

Q. So I see from this slide that the director of safety and the director of flight operations and the director of maintenance all report directly to, or have a direct line to the accountable executive?

MR. BURT:

A. That's absolutely correct.

MS. FAGAN:

Q. Okay, thank you. And this is the last slide in this segment, and I would just like you to explain this. This is the corporate values, and I think it also brings in how you've divided your company's business. Could you explain this slide?

MR. BURT:

A. This is a dynamic practical slide that we use in our organization and as we have taken the

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two divisions, the IFR and the VFR, brought them together and made sure that we weren't pushing a square peg into a round hole, but where there's value added and common sense and synergies, we have found great opportunities in the two companies coming together. Specifically that we both have a very strong safety culture and we've combined that. Every year, if not multiple times through the year, our safety divisions and their leadership get together and will look at those best practices, systems, reporting systems, commonalities. We do fly large aircraft in the VFR division that are the same type in the IFR, the S-61 for example, and the engine runs the same way here as it runs over here. So we're not going to miss a learning opportunity here over on this division. So we've made sure that those communication lines are very, very clear, and that's an example of how those cultures have really complemented each other.

I will also point out that we have learned to share best practices from each division. We've realized that everybody has something quite valuable to offer, and you

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know, we speak about what we specialize in, the IFR and VFR, but as a large organization, we're drawing upon a lot of complimentary strengths, and besides what you see here, it's also a great attraction to new employees to say "look, this is a broad-based company. It's a company I can enter here and go all the way to the other end of the market here." So it provides a great stability for people coming to the company, staying in the company and retaining, you know, that workforce.

MS. FAGAN:

Q. Thank you. I think that overview is very helpful in setting up the context for the segments when we actually get into the departments and the next portion of the presentation is going to be with the St. John's base and I understand Mr. Williams is going to lead us through the section on the St. John's base, which is what transports the workers to the east coast of Canada, which is our mandate, the offshore of Newfoundland and Labrador. So Mr. Williams, can you move through the slides and explain the St. John's base?

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MR. WILLIAMS:

A. Okay. As Rick has just described very well, I think, you know, all of our corporate operations, international and globally, but I'm going to be, you know, very specific on exactly what we do in St. John's, Newfoundland and we always say we're very proud of what we do in St. John's, Newfoundland and I would -- I think I can safely say it's the flagship of our operation and what we do. A lot of our systems were developed here and transported to our other divisions, so we're very proud of what we do in St. John's.

MS. FAGAN:

Q. Okay, thank you.

MR. WILLIAMS:

A. Okay. This, of course, this slide here shows our facility. It's been my home for the last 13 years. I can remember walking into that place when it was a bit of steel, and that goes back to a lot of what I want to say upfront about our core activity in St. John's is moving passengers offshore. In the 13 years we've been doing that, I think about how many times I go down and I walk in amongst the

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passengers in this facility. So we're not just transferring people. We're transferring a lot of my friends and my family, these people offshore, and this has been my home and I'm sure a lot of people that entered into the oil industry for the first time, as I did in 1997, did it through these doors right here. So it's -- anyway, the facility was constructed in 1996. We did a fairly expensive expansion in 2007 where we added a lot of items that took care of our administrative functions, but a couple of key components that we built into our operation in 2007 was the construction and development of our OCC, our operational control centre, which we will get into a little later on down. We also did some expansion to our arrivals and departures area.

So the facility itself, Rick spoke about the volume of helicopters we have in our operation. This facility alone, when we refer to the hangar, I mean that is where the aircraft are kept. It can accommodate four large aircraft, and when I say four large aircraft, I'm talking about the S-92 or the S-

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61 variety.

Our current fleet in St. John's consists of four S-92s currently and an S-61 that arrived there -- that left, I think, Victoria, B.C. right over Christmas, New Year's and arrived here in St. John's in the first part of January. As you can see, the registration numbers here depict and each of those aircraft, each of our oil companies -- for example, Hibernia would have under contract one of those S-92s. Husky would have one of those S-92s. Suncor, one of those S-92s and currently ConocoPhillips operates one of the S-92s.

MS. FAGAN:

Q. The S-61 is that currently under contract and why was that brought in? You say it was just brought in in the last month or so?

MR. WILLIAMS:

A. Yeah.

MS. FAGAN:

Q. And so why was that helicopter -- where did it come from and why do we have it here in St. John's?

MR. WILLIAMS:

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A. Okay. As part of our business process, we very frequently get together and discuss fleet planning and as Rick had said, we have helicopters that sometimes are under contract or not under contract. We had a discussion probably back in October, November, where we had an S-61 sitting in our Victoria facility that was not currently under any existing contract. So I asked Rick and the management team if I could bring that aircraft here to St. John's, bring it here pretty well on spec for want of better words. It's not under any official long-term contract. To have it here available if an oil company or an operator wanted to use it, either in a search and rescue capacity or a passenger carrying capacity. The S-61 that's currently here is fully fitted for a search and rescue service, as well as passenger carrying offshore and I'm not sure of the actual number of days, but this aircraft have been used since January by our existing customers here on an as-need basis. So it's not on any long-term contract as we speak.

MS. FAGAN:

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Q. Okay, thank you. You've mentioned your customers, so I think the next slide will take us to who they are.

MR. WILLIAMS:

A. Okay.

MS. FAGAN:

Q. And we've seen something similar to this.

MR. WILLIAMS:

A. Yeah, you've probably seen some of this before, but anyway, our St. John's base, of course, 1997 was when we started operations for Hibernia. The first flight offshore, June the 4th, 1997. So you know, we started out with Hibernia as one single customer here in St. John's. In 1999 is when we started flying offshore for Petro-Canada at the time, now Suncor, of course. 2002 is where we entered into activity for Husky Energy on a long-term basis. I think prior to that there may have been some sporadic production wells that we did for Hibernia back in 1999-2000 area. So Hibernia, Suncor and Husky are our three long-term core-based customers here in our St. John's base. Currently, as we sit here today, ConocoPhillips is here on the Laurentian Basin drilling a well and is due to complete that well sometime maybe around June/July. So that's four customers that we currently operate out of our St. John's base.

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MS. FAGAN:

Q. Thank you. Now how was Cougar selected by the oil operators? Now we heard from the presentation by the oil operators about the selection process. So could you just describe how it came about that you ended up with these contracts?

MR. WILLIAMS:

A. Yeah. Well, Rick, I think Rick alluded to Hibernia went to an RFP, a request for proposal process where Cougar was able to enter a bid and were successful in winning that bid and became the client to Hibernia. Similar for Suncor and Husky, both of those operators issued an RFP where Cougar had the opportunity to go through a bidding process and became the successful carrier for those both companies as well. So all three of our main core customers went through the same process of acquiring a contract under issuance of an RFP and then a bid process.

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MS. FAGAN:

Q. Okay. We have already had presented to us by the oil operators the contracts with Cougar and what's in as exhibits is excerpts of the ExxonMobil contract which deals with HMDC, and that's 132, and the Suncor contract has been marked 140, and the Husky contract has been marked 148. Are you satisfied to deal with those exhibits, if there's any need to reference contracts, or do you want to put in separate or we're going to go with what's already been entered as the contracts?

MR. WILLIAMS:

A. Yes, we're fine with what's in, absolutely.

MS. FAGAN:

Q. Okay, thank you. The next slide speaks to the POB, and you indicated that when you started that was your first contribution really is developing the personnel on board system. Who are you or how many are you currently transporting?

MR. WILLIAMS:

A. Okay, and POB or personnel on board is a very important component. When we think of -- when we say we're supplying services to a facility,

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how much service do we really need or capacity we need is totally contingent on the POB, how many people is on board that need to be changed. These numbers I have here represents the max POB capacity, which all of these may hit at any given time. It doesn't represent the current for today.

MS. FAGAN:

Q. Okay.

MR. WILLIAMS:

A. So from an Hibernia -- on the Hibernia Platform, we can go as high as, you know, 250 POB out there at some points in time. Suncor, with their Terra Nova FPSO, can reach 120 personnel on board. Husky Energy currently has three operating facilities that we are flying to: the GSF, the drilling rig, 125 POB; their SeaRose FPSO, their production unit, 100 POB; and again, the Henry Goodrich, another drilling rig, with 120; and the Stena Carron on the Laurentian Basin, up to as high as 180 POB. So on any given day, that offshore population could reach 800, you know, 895- 900 POB. So it's a very, you know, huge number. It's a lot of communities in Newfoundland --

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we have a population offshore that represents a lot of communities in Newfoundland, and for the most part, the service to those POB are on 21-day rotations that allow us to carry the bulk of those people back and forth on a 21-day rotations.

MS. FAGAN:

Q. Okay, thank you. We have the -- we've had the next chart in, which I believe is the locations. I don't know though if a lot of time had been spent on the last three. So for the record, could you go through the locations to which you're now flying?

MR. WILLIAMS:

A. Okay. I'd like to speak to what we refer to, of course, as the Jeanne D'Arc Basin and that's where our three core customers are residing with their activities. ExxonMobil is the Hibernia field. It's the closest to our heliport, 171 nautical miles from St. John's. Suncor Energy operating the Terra Nova field, 188 nautical miles from St. John's, and the White Rose field, the Husky Energy project, 200 nautical miles. These are the areas that we fly to called the Jeanne D'Arc Basin where

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they're all in very close proximity to each other. In those areas, we do -- you know, there may be activities where there's actually shared flights, where we could have flights going that people are going to all those facilities, they're all in the general vicinity.

But I'd also like to speak to ConocoPhillips which is, you know, down off the coast, off of the Burin Peninsula, 196 miles from St. John's, that we currently fly to, and I've also put the Flemish Pass on this slide because it represents the furthest area of flying that we've done since we've been here in 1997, roughly 196 nautical miles from St. John's, and we all look forward to the Hebron Ben Nevis, of course, which is right in the Jeanne D'Arc Basin activity as well.

MS. FAGAN:

Q. Now the Flemish Pass is 274, is it?

MR. WILLIAMS:

A. 274.

MS. FAGAN:

Q. 274, and for the Flemish Pass, can you reach the Flemish Pass, the 274 nautical miles,

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without stopping? I mean, can you go and come back or do you have to stop at one of the rigs and refuel?

MR. WILLIAMS:

A. Yeah. The typical requirement to fly to the Flemish Pass would be the S-92's capabilities with one auxiliary fuel tank. Depending on winds and weather, we may require two auxiliary fuel tanks, but the S-92 will require the provision of an auxiliary fuel tank to reach that destination of the 274 nautical miles. So we do go direct from St. John's, but it's with the S-92 and the aux tank fuel requirements.

MS. FAGAN:

Q. Okay. So at least one auxiliary fuel tank and you can get there and -

MR. WILLIAMS:

A. Correct, one and sometimes -

MS. FAGAN:

Q. - without a stop.

MR. WILLIAMS:

A. One and sometimes two, depending on winds and weather.

MS. FAGAN:

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Q. Okay. You mentioned sharing. We can see from the chart that the ConocoPhillips operation is quite a distance from the other three main contracts, so is there any sharing? I mean, if you're going to go to the Laurentian Basin, it's a direct flight and back. There's no sharing or stopping at the other facilities. Would that be fair?

MR. WILLIAMS:

A. No, no, the ConocoPhillips program operates totally with dedicated flights with strictly ConocoPhillips passengers that we would be carrying to that facility.

MS. FAGAN:

Q. Okay, thank you. Now you have also provided an outline of your departments and could you just go through those departments because once we move into the video segment, we will actually be having videos that deal with each one of these departments.

MR. WILLIAMS:

A. Okay. As I said earlier, St. John's is the flagship of our operation and a lot of our department heads reside in St. John's. I'll just go briefly through the various

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departments. Of course, as Rick already mentioned too, our maintenance department, controlled under the director of maintenance, has areas and people employed in quality assurance, people engaged in the HUMS activity, health and usage monitoring systems which Rick will get into a little later as we go down, and of course, stores and parts and all that activity required to support our aircraft from a maintenance perspective.

Our director of flight operations also resides in St. John's and his department responsible for all the training requirements of flight crews, the dispatch centre which operates out of our operational control centre, and again, we'll get into that a little later on in more detail, and HFDM, helicopter flight data monitoring, which is another very important aspect of flight operations, reside in our St. John's operation as well.

I mentioned our operational control centre a few times now. That operational control centre is located in our St. John's facility, staffed not only to support St.

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John's but to support a lot of the global operations that Rick mentioned. So we have -- if an aircraft is departing out of Australia, it goes through our dispatch centre for all the dispatch criteria.

MS. FAGAN:

Q. So are you saying that the centre that's in this building that's in this picture, in St. John's, is not only managing the east coast flights, you know, offshore Newfoundland and Labrador, but it's also managing flights in some of those locations that Mr. Burt pointed out on that chart?

MR. WILLIAMS:

A. Yeah, for Cougar Helicopters.

MS. FAGAN:

Q. For Cougar Helicopters?

MR. WILLIAMS:

A. For Cougar Helicopters, correct, and it's a -- and I look forward to getting in there too, because it's -- we're very proud of that OCC and what it does there. And of course, the passenger movements department, that's our specialty. That's what we do. That's what we're here for. We're here to move

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passengers. Traffic coordination, very important. POB management, and when I say POB management, I mean our systems that we use to manage the passenger movements department is the primary system in the event of an emergency. Tells us who's on board what rig, how long they've been there, and it monitors and controls all the pre-requisites for getting there. If someone does medical or survival training is outdated, these systems do the monitoring and the controls on that, and that falls under our passenger movements department. Our passenger movements department, of course, also takes care of passenger security, another key component, which we will get into later.

Search and rescue department, which we spoke of, and our safety department, which Mr. Banks heads up, our aviation safety, our HSE, our health safety environment and all of our ISO programs, International Standards Organization programs. Of course, we couldn't run a base without our finance departments. We all need those. And information technology, we have a very in-depth IT team in

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our facility that support our operations and have contributed a lot towards a lot of the systems we use in our safety programs.

MS. FAGAN:

Q. Okay, and then just -- we don't -- we have another slide here which gives the staffing. I don't necessarily need all the numbers. What I'd like you to highlight really is how many people there are in the -- say, the pilots, the aircraft maintenance, a few of the main departments. I know all the departments are important.

MR. WILLIAMS:

A. Yeah.

MS. FAGAN:

Q. But if you could just give us a sense of the size.

MR. WILLIAMS:

A. Yeah. The numbers will vary in these departments, all depending on the volume of aircraft we have here. If aircraft depart or aircraft arrive, there's subsequent pilots and engineers that will come to support that program. Currently, as we sit here today, we're operating with 31 pilots in our St.

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John's base and we have 36 engineers in our facility, aircraft engineers, inclusive of our avionics team as well, and I'd like to speak about our rescue specialists. We have 12 dedicated rescue specialists located in our St. John's facility as well, and of course, there's some other numbers there, like our passenger movements makes up about 18 personnel. I won't go through all of them, but dedicated personnel to St. John's that support our operations today is around 158 personnel.

MS. FAGAN:

Q. Okay, thank you. And the final slide in this section is an overview of how much you've moved. So can you just give us the 12-year operational performance and the precise numbers are here, but could you just round them up or down?

MR. WILLIAMS:

A. Sure. Okay, the numbers here depict from starting in June the 4th 1997 and up to January 2010. From a flight hours perspective, the amount of hours we've spent in the sky is close to 60,000 hours since we

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started in 1997. We have moved in excess of 275,000 passengers since 1997. Offshore trips, and the definition of an offshore trip is when an aircraft leaves St. John's and when it returns back to St. John's. We've done over 16,000 of those. From a cargo transferred, and I want to be clear on cargo. Cargo is a combination of passengers' baggage, newspapers and any other freight that we would have carried. We've exceeded a million pounds of cargo since we've started in 1997.

MS. FAGAN:

Q. So does cargo include passengers?

MR. WILLIAMS:

A. No.

MS. FAGAN:

Q. No?

MR. WILLIAMS:

A. No, cargo is anything other than passengers that we carry.

MS. FAGAN:

Q. Other than the passengers?

MR. WILLIAMS:

A. Yeah.

MS. FAGAN:

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Q. Their baggage and then any other type of -

MR. WILLIAMS:

A. Baggage, newspapers.

MS. FAGAN:

Q. Any other type of items?

MR. WILLIAMS:

A. Smaller pieces of freight, yes.

MS. FAGAN:

Q. Now we're about to go to the break, so the next section is the selection of the S-92. So I think it will be a nice time to break.

COMMISSIONER:

Q. Yes, we'll take the break now then.

MS. FAGAN:

Q. Thank you.

(BREAK)

MS. FAGAN:

Q. Okay, the next section is going to be with respect to the selection of the S-92, which is the helicopter that's being used, and Mr. Burt is going to take us through this section and then we'll start moving into the videos.

MR. BURT:

A. Okay.

MS. FAGAN:

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Q. So could you please explain -- I understand you have a slide that deals with the selection and the transition, because you didn't always operate S-92s, so can you take us through your transition slide? Thank you.

MR. BURT:

A. The selection process of the S-92, first of all, I was directly involved in this process and I was directly involved with Petro-Canada. Petro-Canada was a key player as we started this analysis of aircraft transition, and our contracts are operating contracts and Petro-Canada's particularly envisioned, right from when they were let, that there was a clause, an article that said that there was a provision for the new technology and implementation of new aircraft technology. So there was always a vision that eventually we would look at a new technology aircraft.

In this transition, the first S-92 arrived on the scene here April 7th, 2005, and in that selection process we went through, we looked at a number of factors. Together with Petro-Canada, we looked at capacity, growth. Growth meaning capability of growth in gross

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weight, in performance of the aircraft and also in certification. Was it designed to the latest standards? Cabin size, cargo carrying capability, in the case of the S-92 with the back ramp was also significant. And then commercially, the seat, cost per seat mile was also important in that evaluation.

We also had discussion about support. It's very key. Of course, here in St. John's as to where we'd like the aircrafts best supported from. What was a good support stationing? Was it European support as the Eurocopter product or the Connecticut support out of the Sikorsky product?

MS. FAGAN:

Q. Now when you mean support, this would be from the manufacturer? Who's going to provide parts and -

MR. BURT:

A. Right.

MS. FAGAN:

Q. - updates and direction with respect to the aircraft?

MR. BURT:

A. Yes, of course. So as we go through an

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attrition of parts and maintenance, specialized tool, specialized support services, you know, from the manufacturer, that's essentially what we're referring to.

MS. FAGAN:

Q. Okay.

MR. BURT:

A. The evaluation of the aircraft, also a fundamental part of that, we had to bring in the simulator. Our business, Cougar's mandate, is we've always employed the highest end simulator training in our organization, whether it was required or not. We led the industry in 1989. We started training on flight simulators. In fact, we certified the first three in Canada together with Transport Canada. So for us, bringing a new aircraft type in, a discussion of whether there was an approved flight simulator was very important, and in this case, the S-92 had a flight simulator that was going to be certified prior to the start of us receiving the aircraft. In the EC225, there was not a simulator available.

MS. FAGAN:

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Q. So what is the significance of having the simulator certified before the aircraft is in service versus having the simulator after you have the aircraft?

MR. BURT:

A. Well, in the case of the EC225, you would have to either train in the aircraft or a model of the Eurocopter product which was dissimilar to the EC225. So it's kind of negative based training. You know, we always say in the business, you train as you fly and you fly as you train. And for us, we also had very specialized operational limitations that are approved and certified in the simulator. In other words, the ability to land here at this airport with a reduced approach minima, letting us land in bad weather. We receive that certification based upon a yearly -- initial and a yearly certification in an approved flight simulator. Without that simulator, we lose these privileges. So there's a training aspect and there's a capability aspect that we would lose, and for us, when we selected the aircraft, there was no tolerance in that. We do not train in the

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aircraft. We train in the simulator, because even training in the aircraft, you have to kind of fudge or simulate that type of training, but truly the simulator provides that realistic training.

MS. FAGAN:

Q. Okay.

MR. BURT:

A. And as we went on through that selection process, we also had presentations from each operator and from that, Cougar made a recommendation to Petro-Canada and that was accepted to go with the S-92. And as you'll see here on the slide, the transition process is something I'd like to speak about. For us it was very important. It was a methodical approach through a management of change process, which is a term that means something in our business, of course, that every aspect of changing a fundamental aspect of our business has to be managed. It has to be documented, analyzed and we'll go through it in a very well structured process.

The second S-92 arrived in August 1st of 2006. Of course, this is in excess of a year

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of the first one. And it replaced the second Super Puma. The third one came in in June 1st of 2007. So you see a trend here. It's almost one per year, and that certainly helped us in this transition. It was well done. We had no flags that were raised during this process and for our crews, it was quite important. We had to provide training for our engineers, our flight operations people. Because the S-92 effectively carried twice as many people as the Super Puma, it also had a knock-on effect, as Mr. Williams was telling you, on our POB. So our normal trip, instead of being 9 or 10 passengers now was turning into 16 to 17 passengers. Therefore, our capability had to change at our passenger movements facility. So you can see the effect that has to be managed of doing that. All the way down to making sure that we had the lines on our ramp painted to reflect the S-92 as versus the Super Puma.

MS. FAGAN:

Q. Now this next slide deals with the features. I don't want you to go through every single point. If you could deal with some of the

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high points and for those that would like more information, the Cougar Helicopters has provided, and they've been marked as exhibits, a number of pamphlets and there is a pamphlet on the S-92 which has a lot of information, as well as the S-61, and they are at Exhibit 164 and 165. On occasion, the panellists will refer to some of these pamphlets because they're a nice tool and aid in describing some of the aspects, but many of the other items that will be talked about over the next day and a half are in these pamphlets. So I'll just ask you to touch upon the high points.

MR. BURT:

A. Sure.

MS. FAGAN:

Q. And if somebody wants to have more information on the S-92, they can look to the exhibits which are on the website.

MR. BURT:

A. Right.

MS. FAGAN:

Q. Okay.

MR. BURT:

A. And I'll give you some insight. 80 percent of

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these points here are embodied in the new technology certification, what we call the FAR/JAR 29. That is the section of the Federal Aviation Regulations and the Joint Aviation Regulations that stipulate how an aircraft is to be designed under the current criteria. So this aircraft was designed under that criteria. 80 percent of these points that you'll see here are elements out of the FAR/JAR 29 compliance, built standard, and so that's why they're out here. Things like bird strike protection now has a new criteria, what you must be able to sustain with a bird strike. You may be flying in full flight and have a seagull, for example, be able to have that seagull impact the aircraft on any critical part of the structure, any control structure, any of the rotors, the tail rotor, main rotor, the windscreen, and fully survive that bird strike, and that's a very stringent design requirement to the aircraft, just to give you an example of some of the requirements.

But practically, again, some of the criteria that we've seen in the S-92 is that

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all the seating configuration of the aircraft is lined up with a window. Every row of seating has a window. There's no mixing as in other aircraft. And that was important to us. The cabin was the largest in class. That was important as well. The back ramp was a very interesting application because we didn't have to go through the cabin to put baggage in or interfere with passengers and we just lower the back ramp and put our baggage in. So these are some practical applications.

MS. FAGAN:

Q. So the baggage or cargo, as I understand it, is in a separate compartment?

MR. BURT:

A. That's absolutely correct.

MS. FAGAN:

Q. And what you're saying is you don't have to go through the passenger cabin. You actually access this compartment through a separate point on the aircraft?

MR. BURT:

A. Right, and it's -- from an ergonomic point of view, you know, there's no bending or people that are arched around with back supports.

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It's a very approachable area where the back ramp is just lowered. There's a cargo bin and you just place the cargo in there. So ergonomically, it was quite different than the other products.

MS. FAGAN:

Q. I note here they have crashworthy seats. Can you describe what a crashworthy seat is versus a non-crashworthy seat?

MR. BURT:

A. Sure. First of all, the crashworthy is that the seat would take an impact, a crash impact of up to 20 Gs, and it would collapse under a engineered and designed manner. The seat would compress, structures would compress and dissipate that crash impact on a point where it offloaded those impacts as much as possible. For example, to have that seat work that way, our seats in the aircraft you can't put anything underneath them because part of the what we call stroking of the seat down is required, and so that's a part of the certification of this seat, and that's both flight crew and passengers, and that's the highest design standard that exists right now.

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MS. FAGAN:

Q. I notice here you got lightning strike protection. We've heard about weather from the oil operators' presentations. Is lightning an issue? Is weather an issue? I notice as well deicing. Is this the type of thing that comes on all helicopters or is this unique to the S-92?

MR. BURT:

A. Well, the certification for lightning strike is, again, it's the latest design certification. So the aircraft has to go under a -- this is in a controlled environment where they subject it to a lightning, a certain amount of joules. The aircraft has a lot of new and modern systems which are electronically controlled, such as the engine control systems. A lot of the cockpit flight management systems are all electronic. They have to not only survive a lightning strike or a static discharge, which sometimes you can get in flying, but they have to stay integral throughout that process. So that is -- you know, they're subjected to that and they're tested under the authority's eyes and they

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have to pass that.

But from a rotor craft icing point of view, although the Super Puma came in 1986 with a certification for rotor craft icing protection, it was on the late '80s -- I mean, late '70s or early '80s, I'm not sure of the exact date, standard. So the standard for rotor craft icing then was quite different than it was in the late '90s as with this latest design criteria. So the S-92 came with that latest design criteria and its icing system was certified under that, which was quite a bit more stringent, as you would imagine, after some 15-20 years.

MS. FAGAN:

Q. Okay. In the beginning, they talk about high intensity field protection and enhanced ground proximity warning systems.

MR. BURT:

A. Right.

MS. FAGAN:

Q. And what feature, how does that assist in safety?

MR. BURT:

A. The HIRFP, as we call it, the HIRFP

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protection, high intensity radiated field protection, is flying around high tension wires, high voltage wires. Even around those areas, they do have an EM signature which can affect electronic equipment. So again, even some of the rigs have some pretty high radiating stuff, such as satellite dishes and that stuff, and this has to pass all of those fields. So that's what HIRFP is.

And enhanced ground proximity warning systems are typically from an airline lineage. These systems are very dynamic and they actually come out in form of a voice and the voice will tell you "too low" or, you know, "glide slope is too low" or "terrain" and it will actually take an algorithm. It'll calculate the height, the speed of the aircraft, do an algorithmic calculation and say "if you keep on this trend" you know, "there's terrain ahead." And it will actually tell you verbally, "terrain, terrain" and so all those systems are implemented into the S-92.

MS. FAGAN:

Q. Okay. We're going to hear quite a bit about

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the health and usage management systems, HUMS.

MR. BURT:

A. Right.

MS. FAGAN:

Q. So I understand this helicopter has this feature.

MR. BURT:

A. Yes.

MS. FAGAN:

Q. You can either describe it now or we can deal with it in detail later, but I do note it's one of the features.

MR. BURT:

A. Sure. I can describe it now, that's fine.

MS. FAGAN:

Q. Okay, sure.

MR. BURT:

A. The health and usage monitoring system in the aircraft is a system which collects data from literally hundreds of collection points throughout the aircraft. It's a little bit difficult to explain in some cases to the general public, but I go back to my Star Trek lineage, and you seen a person lay down on that bed in Bones' office and you see all

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these things in the background saying health rate, blood pressure and everything. It's kind of like that. It takes all these sensory pieces of information such as temperatures, vibrations, even a door open light and all these different things, all the indications in the cockpit, and it brings those into a data collection unit. That information is downloaded after every flight and the software in the aircraft and at the base station is set to certain acceptable criteria as established by the manufacturer and us as the operator, together with the manufacturer. In other words, if the sensor for the main rotor vibration system senses that the vibrations as they measure in inches per second is a little higher than acceptable, then it will trigger off a set point and say "you need to look at this." It is on a trend. It is above what you would call your normally accepted level and you need to look at it in a proactive manner. And we'll take that data and it'll be analyzed and that'll give us a signal. So that's an example of how we use the health and usage monitoring system data.

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Now interesting for our organization and the S-92 and Sikorsky in generally, actually, is that hats off to the manufacturer. They have asked and even embedded it in some of their agreements that the information we gather on the S-92 and the fleet wide information that is gathered from the S-92s throughout the world is downloaded daily and it goes to a control centre in Sikorsky in Connecticut. That information is analyzed in and of itself and also right across the whole group of the S-92 operators. So you have the manufacturer looking at this every day. We look at it ourselves on every flight, and we have a dedicated person in our organization that's responsible for looking at that information.

So in other words, as I say, you can't manage what you can't measure and this is a primary example. You know, if we know what's going on, then we can manage it in a proactive manner and this is why this is such a great initiative.

MS. FAGAN:

Q. Okay. When you mentioned the fleet, so what

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you're saying is not only are you sending your data that's collected every day -

MR. BURT:

A. Right.

MS. FAGAN:

Q. - that other owners around the world of the S-92 are also sending their data to the manufacturer every day. So approximately -- and it mightn't be the entire fleet.

MR. BURT:

A. Sure.

MS. FAGAN:

Q. But do you know the approximate size of the fleet? I mean, how many S-92s are there?

MR. BURT:

A. There's approximately -- the latest count I have are about 115 to 120 aircraft are deployed globally now.

MS. FAGAN:

Q. What other service are you aware of that they're used for? I mean, you use S-92s and you've indicated that the Cougar operation deals with offshore transported workers and SAR. Are you aware of other -- and not every type of usage -

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MR. BURT:

A. Sure.

MS. FAGAN:

Q. - but generally, do you know how the other 80 or whatever the number is -

MR. BURT:

A. The S-92, again, quite prolific in the offshore aviation business. However, one of the markets, I think, that has even surprised Sikorsky is that there's a lot of heads of state that have ordered this aircraft, a lot of areas where you'll have even just a head of state flying in the aircraft as is, somewhat in the configuration we have today, and the aircraft is even configured in countermeasures for some heads of state who may want a little more security, but you know, I'm talking about for countermeasures for missiles and things like that, you know, as you would have a head of state who'd want to have that security. So that's actually quite a big market.

The private market for the aircraft, private people have ordered them, these aircraft as well. But those are the two other major markets, as we see them right now, and they currently are moving towards a pseudo military and even a military role.

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MS. FAGAN:

Q. Okay. I think that -- oh, I had one question before you move to the next. What other -- when the S-92 was being selected, what other aircraft, if any, were available? Like what would have been the competition? Did you consider anything other than the S-92 before you selected the S-92? And if you did consider other aircraft, what were they, and, you know, why didn't you pick the competition?

MR. BURT:

A. The two aircraft that fit the criteria of a new generation aircraft in the large category was the Eurocopter EC225, and that was basically the end of the line for the Super Puma aircraft, and the other one was the Sikorsky S-92. As I mentioned earlier, I described the process we went through. We had them give us presentations on each aircraft and their capabilities, their support, where they were supported from, and what that might look like, and the cost of the aircraft and the support that came into that. Once we had

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that information, we also, again, put a heavy weighing on things such as, you know, will you have a simulator available, and there was a simple yes, no. No, the Eurocopter product was not going to have a simulator ready for some two years. Yes, the S-92 was ready to go day one. So these are significant measures for us. North American support, simulator ready to go, the aircraft in its goodness and its specifications met what we wanted as an organization and Cougar came out firmly and confidently recommending the S-92.

MS. FAGAN:

Q. Okay, thank you. Now your last chart has some of the specifications. These particulars are here and they're also in the pamphlet, which is an exhibit. I just have a couple of areas that I'd like you to cover. How many passengers, and the range and speed, gross weight, could you cover those four topics?

MR. BURT:

A. Sure. It has a capability of carrying up to 19 passengers and two crew. The range of the aircraft, it says here, you know, nautical miles is 750, but let me put it in terms of

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probably a little more practical for you. The aircraft has a capability in zero wind, as we generally talk in specifications, of leaving St. John's, going offshore some 200 miles, returning back to St. John's and having the applicable 30 minute reserve fuel.

MS. FAGAN:

Q. So you have to have 30 minutes reserve after your -

MR. BURT:

A. After that point.

MS. FAGAN:

Q. - when your trip is finished?

MR. BURT:

A. Right.

MS. FAGAN:

Q. Okay.

MR. BURT:

A. So that's the basic tanks, the basic fuel tanks on the aircraft to do that. Now here in Newfoundland, we don't have zero wind that often. So just to let you know, once you get up to 20 knots, it's quite likely that, you know, your range may actually quite easily come back to 190 or 185. So you know, even

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though, yes, zero wind, that's what you can do. As you get higher winds, because of the mass that's required in flying in winds, you'll need to -- you'll burn more fuel. So you'll see that your range does start to shorten up in an environment like ours.

As you know, we've developed the auxiliary fuel tank. So it's quite relevant to our discussion. One of our tanks can give you an extended 45 minutes or the equivalent of going out another 50 miles and back another 50. So we can go, in zero wind, up to 250 nautical miles out and come back and have that 30 minute reserve.

MS. FAGAN:

Q. So we've heard from Mr. Williams the distances to the various facilities and the Husky, I believe, is 200.

MR. BURT:

A. Yes.

MS. FAGAN:

Q. And then the other two are slightly less than the 200. So can you apply -- and I didn't ask the amount of time. I understand a trip, a round trip, how long is a round trip, and can

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you take this range fuel capacity and then apply it to say the 200, the 200 nautical mile, which is the long -- the furthest of the three main customers?

MR. BURT:

A. Right. The range of the round trip will take about 3.4-3.3 hours, like Hibernia and then extend up to closer towards 4 hours for Husky, and let me give you even a more practical application. The need for at least one auxiliary fuel tank for Hibernia, Terra Nova and White Rose respectively would be described as low, medium and high reliance on at least one tank. So quite a high probability we will always need a tank just to do Husky. We have a medium time, maybe 35-40 percent, that we'll need it for Terra Nova, and fairly low because of its distance that the main tanks, we can get to Hibernia. But when we're talking 274, like we're in the Flemish Pass, not only one but sometimes two tanks are required. If we have a 50 knot wind, as happens quite often, we may have to put a tank in just for that. Without the auxiliary fuel tanks, we're not getting our business done on the east coast of

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Canada.

MS. FAGAN:

Q. Okay. So the 20 or 30 nautical miles between the -- you know, the distance, these margins, when you look at them on the chart, well, it's only another 10 miles. It's only another 20 miles. But -

MR. BURT:

A. You got -

MS. FAGAN:

Q. - that is significant in light of the wind?

MR. BURT:

A. And you got to come back.

MS. FAGAN:

Q. The fuel capacity, you got to come back and you got to have your reserve?

MR. BURT:

A. Every ten out is ten more back, so it's 20 nautical miles.

MS. FAGAN:

Q. And do you have -- does the reserve have to also -- does your reserve also increase?

MR. BURT:

A. The farther we go out, the pilot has a requirement to make sure that he takes care of

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all contingencies. So the farther you go out and the weather system, depending on what it is, he may actually carry more contingency fuel. So it may have an effect beyond the pure flight planning value of the winds that day. Depending on the system and the distance, the pilot may actually increase his contingency fuel because of the range, the ultimate range of that flight.

MS. FAGAN:

Q. Would it be fair to say, you know, fuel is critical? You can't underestimate your fuel.

MR. BURT:

A. Yeah, it's been -- I mean obviously fuel is -- the east coast here of Canada is a unique place. Our prevailing winds are westerly. So when you go offshore, you go offshore and you do an approach to a platform which, as we know, the weather here -- for example, in the months between May and August, 50 percent of the time, the weather is reported that it's actually below our legal approach limits. Give you an idea, 50 percent of the time, you know, we can't even land there. So when we go offshore here, we go to do an approach, and

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when we -- if we land on the rig and then we refuel and come home. If we have to do a mis-approach, which does happen, if we can't see the rig, we do a mis-approach and come back home. Coming back home, we're coming into a prevailing head wind and it has its challenges. So absolutely, to answer your question, fuel is everything here and that's why even some of our operators say that when you fly in this region, you must have east coast experience. You don't see that in too many contracts. This region is a very unique region. It's where we cut our teeth. It's what we do and that's where we say, you know, we'd have our harsh weather capabilities. So yes, fuel is critical obviously.

MS. FAGAN:

Q. Okay. What's the speed and do you -- the speed is recorded here as 135. It says typical crews speed.

MR. BURT:

A. Right.

MS. FAGAN:

Q. I understand there's a maximum and then there's a general speed that you may use.

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MR. BURT:

A. Right. In the limitations section, there's a velocity not to exceed of 167 knots, but of course, there's different -- there's a maximum range and that basically will get to the maximum distance, and there's a maximum endurance, what will keep you in the air the longest. You may not have the maximum range, but we use those two. Practically, because of our distances here and the weather conditions, we always fly at the maximum range speed of about 134 to 137 knots, depending what the weight of the aircraft is at that time. So coming back, where it's not that critical, we may be as high as 140 or 142. So the acceptable normal range is about 134 knots to about 142 knots.

MS. FAGAN:

Q. Okay, and you've mentioned the weight. The maximum gross weight, can you explain that term? What is it and why is that significant? How does that factor in?

MR. BURT:

A. Well, that's the maximum all up gross weight as the aircraft has been certified to, and

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that means that, in this case, we cannot be -- with all fuel, passengers and everything on board, we cannot be above 26,500 pounds when those wheels come off the ground, and that's essentially all that means.

MS. FAGAN:

Q. Okay. That's all the questions I have. The other specifications are there and those that are interested, they'll have a chance to question you if they have other issues with this particular slide.

MR. BURT:

A. Okay.

MS. FAGAN:

Q. If there's nothing else that you'd like to add with respect to the selection process, we'll move on to the maintenance section. Do you have anything else for this section?

MR. BURT:

A. The only thing else I would say is that I personally was involved in the process and saw it right through and I have no problem in shamelessly name dropping that I was the first one to fly the S-92 and land it here in St. John's and that was a -- we were very proud of

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that event.
MS. FAGAN:
Q. Okay.
COMMISSIONER:
Q. One thing that I might ask before you leave the subject. When you speak of knots, of course, we know that in marine matters and flying, knots are the -
MR. BURT:
A. Right.
COMMISSIONER:
Q. But most people today -- a couple of generations ago in Newfoundland, everybody would understand knots, but today most people think in terms of kilometres.
MR. BURT:
A. Right.
COMMISSIONER:
Q. Could you translate your figures in knots to kilometres so that people who are watching this may have a better idea?
MR. WILLIAMS:
A. It's on the chart there.
MR. BURT:
A. Our chart here, the 750 nautical miles is --

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the equivalent would be 1389 -- I'm sorry, the nautical miles of 750 nautical miles is 1389 kilometres.
COMMISSIONER:
Q. Okay.
MR. BURT:
A. Outside of that -
UNKNOWN SPEAKER:
Q. Speed?
MS. FAGAN:
Q. The speed.
MR. BURT:
A. I don't know if our distance to the Hibernia platform, if we have the kilometres, for example, to that.
COMMISSIONER:
Q. I think it's 315.
MR. BURT:
A. Right, yeah. So I guess the thing there is that the nautical mile certainly is longer even than a statute mile.
COMMISSIONER:
Q. Yes.
MR. BURT:
A. And understanding that, I realize, it's

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certainly not even as driving your vehicle, whether it's statute or nautical -- or kilometres. This is quite a farther measure.
COMMISSIONER:
Q. Yeah.
MS. FAGAN:
Q. And the speed itself, you spoke of 135 knots. If we were in our car, we'd be looking at the kilometre gauge. So for the record, what is that in kilometres?
MR. BURT:
A. Yeah, it's 250 kilometres per hour.
COMMISSIONER:
Q. So it is quite a difference?
MR. BURT:
A. Dramatic difference, yes, yeah. That's a good point.
COMMISSIONER:
Q. Okay, thank you, because I think some people are just not familiar with knots any more.
MR. BURT:
A. And that's a bit of a handicap. We use these terms all the time in the aviation business as if it's a normal discussion, but you're quite right. It is quite a unique description of

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distance and speed.
COMMISSIONER:
Q. Yeah. Yeah, okay, thank you.
MS. FAGAN:
Q. Thank you. The next section is going to deal with aircraft maintenance, and how we're going to deal with the next six sections is Cougar has prepared a video. The videos run about eight minutes and each video basically is a demonstration of the departments which Mr. Williams spoke about earlier. So we're going to take it from aircraft maintenance and move our way through the departments at the St. John's base, and I'd ask the technical people here to play the video, which is 156 sub 1, and it takes a minute to load, and then we will speak about some of the maintenance department.
(VIDEO PLAYED)
Cougar Helicopters provides transportation for offshore oil industry workers in Newfoundland and Labrador. Since 1997, we have flown more than 13,000 flights bringing more than 270,000 passengers to and from their locations offshore. During that

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time, our pilots have logged more than 60,000 hours of airtime. Managing several offshore flights each day, and doing it safely, requires preparation, planning and communication between all departments of Cougar Helicopters, as well as with our offshore clients and service providers. This video will highlight the procedures and regulations adhered to by Cougar in planning and executing every flight offshore.

Maintenance. It's the last flight of the day at Cougar Helicopters. Passengers disembark, having finished another offshore rotation. They follow their escort to the heliport while the pilot stays on board to shut down the aircraft.

The end of flight operations for the day signals the beginning of the maintenance work day for the engineers and technicians who maintain the fleet of four Sikorsky S- 92 helicopters. For every one hour of flying time, there are three hours of maintenance performed on the aircraft.

This work begins on the tarmac as soon as the helicopter has cooled down, with a

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thorough engine cleaning. Cougar's helicopters fly over the ocean and are exposed to corrosive salt spray and other foreign matter, especially during offshore landings when the aircraft fly at a lower altitude.

Once they have been cleaned, they are started and run long enough to dry the engine. Once cooled down, the helicopter is towed into the hangar.

Before the beginning of every shift, the maintenance team meets for the toolbox talk.

At the beginning of every shift, the maintenance engineers get together in the office and have a chat about what work is scheduled for tonight, what inspections to do, what components to change, and also what defects may have been on the aircraft, as in snags the pilots may have identified during their flight that need to be corrected tonight, before the aircraft leaves tomorrow.

Following the toolbox talk, every engineer logs onto the network to review and complete the read and sign requirement for maintenance staff. This process ensures that each maintenance team member is aware of any

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new technical publications or changes in bulletins revising existing manuals. The engineers will then consult the appropriate manuals with detailed schematics which are often printed and taken to the aircraft. All maintenance personnel are equipped with personal protective equipment or PPE, which include protective eye wear and footwear, gloves, coveralls and high visibility clothing.

The aircraft is given an airworthiness limitations manual by the manufacturer. This manual tells us what maintenance has to be done at what specific intervals, whether it be on an hourly interval or on a calendar interval, by months, days, years and hours.

Servicing stands are put in place to enable access to the aircraft and cord bridges are placed over power cords to eliminate trip hazards. The Cougar maintenance facility in St. John's is clearly not a typical mechanical shop.

The hangar is almost classified as a sterile environment. You can't have things that are flying around the hangar or any dirt

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or anything that may get into parts or seals or anything that may cause damage to the aircraft.

The engineers and technicians who work here are highly trained professionals. An example of this professionalism is the Cougar tool control program which is a vital part of the ongoing quality and safety program within the company. Before beginning work on the aircraft, each drawer of the toolboxes is inspected carefully to ensure that no tools are missing. All tools are stored in custom cut foam inserts within the drawers, which allow for efficient visual inspection to ensure all tools are present and accounted for.

At the end of the shift, an employee will review the toolbox to ensure that all the tools are back in. If the tools are all back in the toolbox, as it was when the box was opened, that employee will close the toolbox, lock it and sign out the sheet for the date and time at which it was signed. If, for some reason, a tool is not in the toolbox that was there at the beginning of the shift, then

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everything stops until that tool is found. Whether it be on an aircraft, in somebody's pocket, in the desk drawer, in on the desk, on the floor, wherever it is, it has to be found before the aircraft are released and let go outside. We cannot have aircraft flying around with tools on them that may cause issues in operation.

On board every Cougar S-92 is a health and usage monitoring system or HUMS. This system provides a wealth of information about the helicopter's mechanical, electrical and avionics systems and may flag an issue that requires maintenance or repair. The HUMS data is downloaded to the HUMS ground station where it is analyzed and then archived. Every day this data is also forwarded to the aircraft manufacturer for their review and comparison with the global fleet of S-92s.

Every night, technicians perform a thorough inspection of each aircraft using flashlights and probes. A variety of connections, hoses, lines, bolts and latches are inspected, tested and verified as properly functioning. This exhaustive and highly

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detailed inspection looks for anything out of the ordinary and is in addition to any regularly scheduled maintenance.

Safety is very important to the maintenance because we know what we're doing. We know the work that we have to do and what's affected by our work. You know, they spend a lot of time working on these aircraft to ensure that everything is in its right place and is perfect and is safe, so it's not, you know, push the aircraft in the hangar and close the doors like you would with your car in a garage and then drive it out tomorrow morning. There's a lot of work goes on after the aircraft are finished flying for the day.

To ensure quality, all maintenance or repair work is subject to a dual inspection by an engineer or technician who was not involved in the original work. The purpose of this is to certify that work was done correctly and components reassembled properly. This is an extra layer of oversight and a part of the Cougar integrated safety management system. Every replacement part for the aircraft must be certified as meeting quality control

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standards and is approved for use on the Sikorsky S-92.

Depending on the type of maintenance performed, the helicopter may require ground running. A number of our maintenance team are qualified to perform this specialized duty, which involves starting and running the engines and turning the rotors. This saves operational time by ensuring the aircraft are flight ready before pilots start their day.

Finally, all maintenance and repair documentation is reviewed and signed off.

We have a saying in the business that the paperwork is not completed -- or the aircraft is not ready to fly until the paperwork equals or exceeds the gross weight of the aircraft. We produce paperwork for the guys to do their work, which we call work spec sheets, which are issued to the floor every day. We have log books that have to be completed and signed out. They're multi-sheets. We have build sheets that we use to do major component changes, and all this paperwork has to go down, be signed out and brought back in again.

(VIDEO ENDED)

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MS. FAGAN:

Q. That is a good oversight over how your aircraft maintenance department works. We were tempted to bring the toolbox in, but we thought a picture would be easier and this video is a little easier to demonstrate some of the processes, but I'd just like to take you through a few of the things that we did see in the video and some things that were not covered in the video, and the first issue I'd like you to cover is the approved maintenance organization, and we heard from Michael Stephenson from Transport Canada and he had told the Inquiry that an aircraft operator must use an approved maintenance organization, and I would just ask you to explain -- and Mr. Stephenson did indicate in his evidence that Cougar has an approved maintenance organization, and for the group here, at Exhibit 158 is the certificate by Transport Canada of Cougar Helicopters as an approved maintenance organization. So we need not get into that part. We know you're an approved organization and we have the certificate as a record. But could you describe when Cougar

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Helicopters first became an approved maintenance organization and briefly go through that process and how that continues today?

MR. BURT:

A. Sure. Any air operator wishing to have an approved maintenance organization has to, number one, understand what the criteria is with Transport Canada, and then they have to have the person responsible for maintenance, in our case, a director of maintenance in the organization, and apply for that. If you are accepted, as we were -- in 1994 is when we received our certificate as an approved maintenance organization, and we've held that certificate intact to our business ever since that point.

Now it just doesn't stay there in and of itself. It is a dynamic certification because an organization grows. It adds certain elements and services to its maintenance organization. In our case, we added other bases. We added other aircraft. Those have to be reflected in one of your key documents, which is your maintenance control manual.

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That is the bible. In fact, we do have regulations that said you must. However, in your maintenance control manual, we embody all of those requirements and in some cases, some more onerous requirements which we say we will comply with. Once that maintenance control manual is certified, that is our ultimate guideline, our ultimate -- not even a guideline. It's actually our ultimate bible. That is the rule.

So as we as an organization have developed, we've added some other complements and other capabilities in our business, such as we have people that are now on board that can work on structures, the airframe, the metal of the aircraft, sheet metal. They can actually -- are certified to work. They are approved maintenance engineers. But we have to embody that in our approved maintenance organization and our MCM. We have avionics, and of course, this is all the instrumentation you'll see up in the front of the aircraft and the electrical as well. That is a specialty in and of itself and that has to be recognized. So there's some growth in that,

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but for us, we've received and maintained our AMO since 1984.

MS. FAGAN:

Q. Okay. I would ask the Registrar to bring up Exhibit 172, which is the maintenance control manual. Now what -- this is a confidential exhibit and what we've -- because it's proprietary, it is a Cougar document, and what we've put forward here is the table of contents. It's not the entire manual, because I think that kind of detail, we can review it, but it's not necessary for this data collection phase. And if you could go to the second page of this manual? You just -- okay, and if you scroll down, I believe this is your reference to -- we see there a stamp. So would it be fair to say -- who is the stamp and the process that Transport Canada goes through with respect to this manual?

MR. BURT:

A. Right. I mean, it's a Transport Canada stamp certifying its certification, and again, just point out that when we have changes in our maintenance control manual, every time we have an effective or material change, it gets re-

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certified and restamped. So again, we've had this integral all the way from 1984, but this is the seal of Transport Canada approving our organization.

MS. FAGAN:

Q. Okay. So the next page, if the Registrar or you can -- I don't know who's going to control the mouse here. This lists effective pages. Would this be the changes to the manual?

MR. BURT:

A. That's correct.

MS. FAGAN:

Q. Okay, and then the types of issues that are covered in the manual are in the next few pages after we get past all the Transport Canada stamps.

MR. BURT:

A. Correct.

MS. FAGAN:

Q. Okay. So what types of issues and topics are covered by the maintenance control manual? Because I understand this is the bible or the overarching document for maintaining that department. Would that be fair?

MR. BURT:

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A. That's correct, yeah. The document essentially will explain how we do things in our maintenance organization, who does them, whose responsibility it is. It'll detail training aspects and it'll go into our paperwork, how it's to be completed, and our different types of maintenance schedules. In other words, we have a progressive maintenance schedule system. It'll speak to that, and all aspects, you know, to those tasks.

MS. FAGAN:

Q. Okay.

MR. BURT:

A. It also, as you can see here, it has a number of policies that are embodied in the document and it is a very specific and a document that is used. It just doesn't sit on a shelf. So it's quite a living document when it comes to the use of the -- not only the management, but the staff.

MS. FAGAN:

Q. Okay.

MR. BURT:

A. Our staff have to be trained. All of our staff have to be trained in the use of this

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document and the knowledge that it carries within, and even that, that examination of their knowledge of this manual is embodied in what they have as a aircraft certification authority. Our maintenance organization will issue them an ACA after they have been taught and tested on the content of this document.

MS. FAGAN:

Q. Okay. There are a number of other maintenance documents and we have not put forward all of the maintenance documents. I don't want to go through the rest, but just for information, the Maintenance Policy Manual, the Table of Contents, is also included in the exhibit list, and the company Maintenance Procedure Manual, there's also a list of a number of manuals, and I don't think it is necessary to go through all of these manuals. What we want to know is how you run your business, how you operate, and how you maintain control and safety. So those records are there for those that wish to view them. I'd now like you to move back to the PowerPoint or the slide presentation and we should be at slide 30, and move to slide 30 which deals with the training

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because you did touch upon the fact that your engineers have to be trained and certified to use these manuals and processes. So can you go through the training regime at Cougar Helicopters for your aircraft maintenance engineers.

MR. BURT:

A. Sure. First of all, Transport Canada are the issuing authority for these licences, and again the engineers have to complete a test and do that, and the experience that our crews have are anywhere from one to 35 years experience. To give you a high level run through of what it takes to become an approved maintenance engineer, they need to graduate from a Transport Canada approved training institute, in this case, Gander is an approved institute. They do need to complete an apprenticeship with an approved maintenance organization, and we have done that and do that on a regular basis, and they'll come on board and be mentored and overseen by a certified engineer. The total experience that they have to log is the equivalent of 48 months prior to issuing of that licence, which

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is quite onerous when you look at that, and then they have to successfully complete a technical exam and again that's a Transport Canada exam that they have to pass. They need to complete a very aircraft specific training course and that training course could be put on by the manufacturer, or if it's approved, it could be put on by the operator. In our case, we send them to the manufacturer, with the S-92, for example.

MS. FAGAN:

Q. So where is the manufacturer? I believe you said Connecticut.

MR. BURT:

A. The manufacturer has a training representative called Flight Safety International, and they're in West Palm Beach, Florida.

MS. FAGAN:

Q. Okay. So that's where you send your aircraft maintenance engineers?

MR. BURT:

A. Correct.

MS. FAGAN:

Q. Okay.

MR. BURT:

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A. And I will add that in the aviation business, the engines are always regarded as a separate component, so they're actually sent to a separate course in Cincinnati, for GE. It's a GE engine. So they go on an engine course and an aircraft course. It's just the dynamic of the aviation business.

MS. FAGAN:

Q. Okay.

MR. BURT:

A. And then after that they need to complete the company initial training requirements, and what I mean by that is orientation into procedures, how to use the manuals, how to use the paperwork, the protective equipment policies, the tool control policies, and the like. All that has to be gone through, and then, as I said before, once that's done, that training is done, they are issued an ACA and that's an Aircraft Certification Authority by the Cougar approved maintenance organization. Without that ACA, they're not allowed to work on our aircraft.

MS. FAGAN:

Q. Okay. Approximately how many aircraft

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maintenance engineers does Cougar have in the east coast, and what would be the total number of aircraft maintenance engineers?

MR. BURT:

A. On the east coast we've got about 36 or 38 engineers here.

MS. FAGAN:

Q. Okay, thank you.

MR. BURT:

A. And we've got a total of just over 50 engineers in our organization.

MS. FAGAN:

Q. Now the maintenance manuals, I don't want to pull out any more manuals, and we've heard from the video -- in that video it identified the speaker as being the director of your maintenance department, Mr. Bob Pardy, is that correct?

MR. BURT:

A. That's correct.

MS. FAGAN:

Q. Okay, and he did go through the types of records that the maintenance engineers have to keep. Could you give us an indication as to how many manuals the maintenance department

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deals with or uses in maintaining the S-92? I mean, what we have as exhibits are three overarching control manuals or policy manuals, but they're not the manuals for the equipment, is that correct?

MR. BURT:

A. That's correct. I mean, there's illustrated parts catalogues, there's component manuals, there's instructions for repair of the aircraft specifics, like, every work action that we take on the aircraft. For example, changing out a fuel control will come with a complete list of directions from the manufacturer, and then all the other ancillary equipment such as a radar, or a satellite communications system, or an emergency locator transmitter, all those have to come with manuals from their manufacturers which the Engineer Department does hold and they do use in the maintenance of the aircraft, and those are in the order of -- it's almost reaching over 50/60 manuals just for those ancillary pieces of equipment, and then dozens and dozens of other support manuals to effect the work and complete the job. Again there's

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literally thousands of pages. I know that the Engineering Department would like for me to be very specific that there's an extreme amount of information, but I sort of boil it down to say that they don't call it a maintenance library for nothing, because it's literally a full wall of manuals, and additional electronic manual database as well, which is becoming more prolific actually and we've embodied that in our organization in how we do our work.

MS. FAGAN:

Q. So when you have an electronic manual system, what benefits does that bring? I mean, we all know the paper is there, but every time there's a change, you're going to have to get a new piece of paper.

MR. BURT:

A. Yes, correct.

MS. FAGAN:

Q. So how does the electronic manual system at Cougar work?

MR. BURT:

A. Well, we operate from whatever manual we're using at the time, however, when revisions

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come in, the revisions go through our Quality Assurance Department and our Technical Records Department, and those updates are issued electronically in our system, and that includes the laptops that the engineers will use out of their workstations and that's verified by our Quality Assurance. The benefit there is that we're not replacing some 200 pages and all the errors that might introduce. This is a document that comes through, it's vetted through, one document from the manufacturer. So there's a lot of integrity in that for us when we're doing amendments.

MS. FAGAN:

Q. Okay. How do you implement your maintenance, and in particular, can you describe the maintenance intervals, what is a maintenance interval?

MR. BURT:

A. Sure. I think it would be important to take it right from the practical. You saw in the video -- I think it well describes some of the intervals all the way from you would start from a flight when it goes offshore and comes

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back. If we have a second flight, we'll do a turnaround check and that's actually stipulated in our maintenance control manual that we will do a turnaround. They'll open up the cowlings, look at the aircraft. The aircraft when it comes in after the end of the day will come into the hangar and it has a very specific daily inspection. All those steps are specified in our Maintenance Control Manual or the supporting manuals, and we have to do a daily inspection. Then on top of that, depending on if there's any snags that came back, you know, that my window was leaking or the radar, part of this thing wasn't working correctly, those snags have to be registered in the journey log which is a document that goes with the aircraft, and then transcribed over to the technical log which the engineers will have. So they'll take that and they'll work on that snag. On top of that, we also have a work spec sheet or specified work intervals that make sure the aircraft has scheduled regular maintenance done. Now there's two ways that that can be done. It can be done at -- in this case,

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we'll have a 1250 hour inspection, which is quote an onerous inspection. The aircraft could be down for seven days until it's completed. They'll look at airframe components and everything else. In many organizations like ours, we do what's called "progressive maintenance", and that is an approved Transport Canada certified method of completing those items in that 1250 hour inspection in intervals all the way through so the aircraft doesn't go down for seven days. We can take it, say, for two days on a weekend here, one day here, two more days here, where it doesn't affect the operation, so it's spread out, and we find that more effective and more compliments the capacity and a practical line environment. That's how we do it. That's all specified, laid out, and certified by the regulatory authority to complete all those interval type of inspections.

MS. FAGAN:

Q. Okay. The next issue is the alert service bulletins because what you've described is the regular known preplanned maintenance, but I

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understand that on occasion you can receive an alert service bulletin, or you can receive an airworthiness directive. So I'd like you to take us through the service bulletin first, explain what that is. Now we heard some of this from Mr. Stephenson for Transport Canada, but it is a significant and important aspect of maintenance, so I'd like you to review the alert service bulletin and then the airworthiness directive, and in particular, since you're the one flying our workers offshore, I'd like to know how does Cougar Helicopters deal with those notices when they receive them?

MR. BURT:

A. Right. Alert service bulletins and airworthiness directives are standard in the aviation business, whether you're flying fixed wing, helicopters, or any aspect of how you fly. It is a standard part of our business. Alert service bulletins and ADs are usually raised when there's an issue in the aircraft, primarily to do with a safety related issue, and an alert service bulletin is an essential requirement. It's issued by the manufacturer.

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MS. FAGAN:
Q. Okay, I understand you have a slide, so we'll move to slide 31, and I don't want you to go through all of the --
MR. BURT:
A. Sure.
MS. FAGAN:
Q. You can just point out the high points and explain this in your own terms.
MR. BURT:
A. Right. So again as we pointed out, this slide here does speak to the elements we're discussing. We talked about items affecting safety. Compliance for an alert service bulletin is essential, and it provides instructions. So it'll tell you this is what we want done, the manufacturer, and it will specify the instructions, the timeline to effect that work, and that timeline could be flight hours, it could be calendar, three months, and that's the compliance period. When we receive an alert service bulletin or an AD, for that matter --
MS. FAGAN:
Q. So do you want to explain what an AD is?

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MR. BURT:
A. An AD --
MS. FAGAN:
Q. And then perhaps move to the next slide which is 32 and you can explain an AD, and then the implementation of those?
MR. BURT:
A. The difference is the AD versus the ASB is that an airworthiness directive is issued by the regulatory authority, in our case Transport Canada, and that is a privilege and a mechanism they have to -- in some cases, they'll issue an AD on top of the same ASB, and put a regulatory stamp and say this is a legal binding requirement by this regulatory authority that you comply with this ASB or the contents. So they're quite different. One is issued by the manufacturer, the ASB; the other one by the regulator. Now understand that we are a Transport Canada certified organization, and other places like the FAA in the states, or EASA in Europe, do issue ADs and they apply to those regions, not to us per se.
MS. FAGAN:
Q. Okay.

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MR. BURT:
A. So for clarify sake, I think it's important to understand those. When a manufacturer issues an ASB, it is to all operators of that equipment right across the board.
MS. FAGAN:
Q. Okay.
MR. BURT:
A. And again the AD is a legal binding requirement by the regulatory authority.
MS. FAGAN:
Q. Okay. So a AD issued by Transport Canada, because you're a certified operator in Canada, you would have to comply with an AD from Transport Canada?
MR. BURT:
A. That's correct.
MS. FAGAN:
Q. But what is EASA? You have it here, E-A-S-A, what's that?
MR. BURT:
A. EASA is the certifying authority for Europe.
MS. FAGAN:
Q. Okay.
MR. BURT:

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A. Just like Transport Canada is for Canada.
MS. FAGAN:
Q. So if the European certifying authority issued a directive, it would apply to operators who are registered from Europe?
MR. BURT:
A. Correct.
MS. FAGAN:
Q. Not you as a Canadian operator?
MR. BURT:
A. The same as the FAA in the States, if they issued an AD, that would be for US operators.
MS. FAGAN:
Q. Okay. What about the type certificate, the original manufacturer, if the authority that certified the aircraft -- like, the S-92 was certified by the FAA, which is the manufacturer. So if they issued ADs because they're the original type certifying authority, does that apply to the S-92s?
MR. BURT:
A. Yes, because it's the country of manufacture.
MS. FAGAN:
Q. Okay. So it's because it's the country of manufacture that sort of applies?

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MR. BURT:
A. Yes.
MS. FAGAN:
Q. Versus you're not registered to operate out of the United States, but you're operating a aircraft that was originally manufactured in the United States?
MR. BURT:
A. That is a difference of what we're talking about here. The same thing with ASBs, you know, they're raised by the manufacturer, but under the guise of the country in which the aircraft is manufactured. That's an important point when you're talking about these documents.
MS. FAGAN:
Q. Now both of these documents basically are a set of directions. Whether it's an AD or an ASB, it's directions on how to maintain or what to do with the aircraft. How does Cougar Helicopters treat these documents, in that when you get an AD or when you get an ASB, what do you do with it? Do you treat them differently, and if so, you know, what's the different chain, and if you treat them the

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same; fine, say so, and then tell us how you deal with it? Take it through the steps from the minute you get it, what do you do with it.
MR. BURT:
A. Sure. The two of them are treated the same.
MS. FAGAN:
Q. Okay.
MR. BURT:
A. They come in to our organization, and in our organization we have a very specific Transport Canada required Quality Assurance Department and Manager that will receive that ASB or AD, they'll review it for applicability. For example, we may get an ASB for the S-92 that speaks to a piece of equipment that we don't even have because there's a wide range of equipment that may go on the aircraft, so we review it, number one, for applicability, does it apply to this aircraft, do we have this piece of equipment they're referring to, and if it does, then it gets -- the document gets further reviewed for what compliance timelines are in there, if it's months or hours, and the Quality Assurance Department will take the responsibility to make sure that that is

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logged into their system and that they have the oversight of that. The document then is forwarded to our Maintenance Planning or the Chief Engineer for that aircraft, and from that point on the content, the maintenance action that's to be taken is put into our work specification plan, our planned maintenance, and if required, parts will be requisitioned through our stores department at the direction of our maintenance planner at that time as well. Once that happens, those directions will go down to the floor and we talked about these work specification sheets that the engineers receive every night when they come down, and it will tell them that -- obviously they'll need parts to do it, but it will tell them that there's a maintenance action to be done relative to this alert service bulletin and here's the directions to do it. Once that work is complete, that information will go back up to the Quality Assurance Department through the mandated reporting process, and they will log a record of compliance. In other words, that they have complied to that ASB or that AD, and that closes the loop on

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that requirement.
MS. FAGAN:
Q. Okay. I understand from what you're saying that quite often the AD or the ASB will have a time, a compliance time. You had indicated it might be three months, it might speak in terms of days, or it might speak in terms of flight hours.
MR. BURT:
A. Uh-hm.
MS. FAGAN:
Q. If you get -- if you get an AD or an ASB and it says, you know, complete within 90 days, how do you deal with it? I mean, when do you act on it? Do you wait until day 89?
MR. BURT:
A. Well, certainly first of all we understand the context of what is that compliance period, number one. How we handle it and how we handle all of our ADs and ASBs is that they're implemented right away, we don't hesitate, and that goes into our system immediately and they're always completed before the end of the term. That's just the way that we do it, that's the way our company performs these ADs.

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We don't wait until the last day, they're done as soon as possible, and in some cases, like I said, if we have to order the parts, we'll have to wait for the parts and we'll make sure that we're tracking that, that they arrive in a timely fashion and as soon as they arrived, that maintenance work is completed, but it's important to understand because we're given a time period, our organization and other organizations -- good organizations would do that, effect that maintenance right away.

MS. FAGAN:

Q. The presentation that was put forward by the oil operators in their presentation, they did indicate that there were a number of changes effected at Cougar Helicopters after the March 12th, and the first item that they indicated as a change was that the bolts were changed.

MR. BURT:

A. Uh-hm.

MS. FAGAN:

Q. Now the issue of the cause of the crash is for the TSB, so I just want to keep this very narrow, and in particular, how did you apply this process to the changing of the bolts, in

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particular the time, you know, what was the timing?

MR. BURT:

A. Well, the specific ASB came in. It was, as I say, reviewed by our Quality Assurance Department, reviewed for applicability, it was applicable, and at that time it was brought to the Maintenance Planning Department, and the Maintenance Planning Department throughout that process put that into their work spec sheet program and ordered the parts to effect the maintenance action of that ASB right away.

MS. FAGAN:

Q. Okay, and what would your definition -- in that particular case, what was right away?

MR. BURT:

A. I believe that the -- actually, I'm sure that the parts were ordered -- after the ASB arrived, they were ordered six days later.

MS. FAGAN:

Q. Okay.

MR. BURT:

A. The compliance time period for this particular ASB was one year or 1250 hours, whatever comes first.

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MS. FAGAN:

Q. And when -- and I understand that this was complied with before Cougar resumed transporting passengers after March 12th, is that correct?

MR. BURT:

A. Yes, that's correct. We had to wait for the full arrival of all the parts, and when they got there, we effected that ASB right away. When that was complete, that record of compliance went back up and those aircraft were deemed airworthy at that point. They were deemed airworthy again by Transport Canada.

MS. FAGAN:

Q. Now you noted the arrival of the parts. Do you have any indication as to when the parts arrived or what the --

MR. BURT:

A. Sure. We were starting to get some parts as early as March 13th.

MS. FAGAN:

Q. Okay.

MR. BURT:

A. And again the requirement of this ASB said we

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had to comply with that ASB before the next flight. So that was actually enhanced through an AD as well.

MS. FAGAN:

Q. Okay, that wasn't the original --

MR. BURT:

A. Correct.

MS. FAGAN:

Q. Originally you had 1200 hours?

MR. BURT:

A. That's correct, yes.

MS. FAGAN:

Q. And when you had 1200 hours, you ordered it within six days?

MR. BURT:

A. That's correct.

MS. FAGAN:

Q. Now the last section, the video did deal with the health usage monitoring system, so I don't think we need to go through that. The video dealt with it and you did explain that aspect when we were talking about the features of the S-92. So the only other area I would like to cover under the Maintenance Department is chip lights, and I'd just like you to explain what

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is a chip light. We've already heard that chip lights go off in the S-92, and the process -- I mean, what is a chip light, what happens when a chip light is detected?

MR. BURT:

A. Sure, and to give you some background, I mean, chip lights, ever since I started flying in 1979 had been part of flying helicopters, so it's a very common system in a helicopter. Chip lights exist in the tail rotor gearbox, in the intermediate tail rotor gearbox, main rotor gearbox, the input section, typically where you have gears and moving parts. These chips -- chip detectors are literally plugs that sit into those sump, sort of bottoms of those main gearbox oil reservoirs and they're made to detect and pick up any ferrous materials because they are magnetic. They're called mag plugs, they pick them up. They'll bring in that ferrous material to the magnet and if the material crosses over from one pull to the other, it will turn a light on. Now before it does that, there's actually some delays in that where instead of getting a little bit of fuzz that could cause an

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immaterial light, they do have an ability to wash away or even what they call fuzz burn, it'll actually just burn the little bit of fuzz off. So they'll only leave something that's material, literally and figuratively, on that chip detector saying that there's something here and, you know, in your gearbox and you need to pay attention to it. So it will put a light on in the cockpit saying that you have a chip light, and again the benefit of this system is that it's a -- for us, it's a very proactive tool that we use to make sure that we know what's going on with the aircraft. In many cases, it will pick up small little slivers, again with all that metal going around there. It could even be - in some cases in the past, there's been oil cans that have been opened up and a little sliver from the oil can when they were pouring the oil went in, and even little things like that are picked up, but again it's a very -- it's a proactive tool that we use from the engineering side of the business.

MS. FAGAN:

Q. What happens when a chip light is detected,

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what's the process?

MR. BURT:

A. Right. If the aircraft is, you know, say, to give you an example, flying offshore, if they get a chip light, our crews are trained to conduct the abnormal checklist. There is an abnormal checklist, how to handle that, once it's assessed and the flight will turn around and advise Transport Canada, come back to St. John's maintenance base and bring the aircraft in and have the Maintenance Department look at it. They'll pull the chip plug, look at whatever is on the chip plug indicator, the material, and from that point on they have a series of procedures and maintenance manual procedures to deal with that, including even engaging the manufacturer should that be required.

MS. FAGAN:

Q. So you wouldn't -- if you have a chip light, you wouldn't necessarily know what the situation was until your maintenance engineers physically got at the machine and had a look?

MR. BURT:

A. That's correct.

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MS. FAGAN:

Q. Would that be fair?

MR. BURT:

A. That's correct.

MS. FAGAN:

Q. Okay, and you've noted that chip lights are not new. You said that in your early days there were chip lights. Is a chip light indicator common in all helicopters or is this a rare --

MR. BURT:

A. Well, you know, as I say, I've been flying now over 30 years and it is part of doing our business, and it's a proactive tool and it is something that is standard throughout the business, and, of course, yes, it does happen and I'm glad we have that tool in our toolbox.

MS. FAGAN:

Q. Okay, thank you. The next section is dispatch and that will involve another video before we get into dispatch. I'm not sure exactly how long the video is. Commissioner, I would look for some direction. I know that I timed most of the videos, some were six minutes and some were eight minutes, so I don't know if we have

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time to look at the video, but there are a lot of questions that go with the video. So it's perhaps best to deal with the video and then have the questions together.

COMMISSIONER:

Q. Better not to separate, I think, the video from the questions.

MS. FAGAN:

Q. Yes, I agree.

COMMISSIONER:

Q. So probably we should adjourn.

MS. FAGAN:

Q. I know it's five minutes early, but --

COMMISSIONER:

Q. Probably we should. One question before -- we will adjourn and show the video after. One question occurs to me, not in our context here in Newfoundland and Labrador, but you recall there was a Super Puma which crashed in the North Sea about two weeks after the accident and the crash here. Now my reading on that, from a preliminary report that was made some time ago actually, was that in that case a chip or a spall, they used the expression, same thing, a piece of metal was found and

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they took apart the gearbox and they searched to see where it might have come from and they couldn't find any place where it might have come from.

MR. BURT:

A. Uh-hm.

COMMISSIONER:

Q. So they pondered this and thought about it, and they put it all back together, refilled it with oil, and gave a certain amount of time in hours and days or months, whatever, weeks perhaps, the helicopter could be flown, and, of course, unfortunately in that time frame the helicopter went down. How does a maintenance department protect itself from catastrophic events like that?

MR. BURT:

A. I'll try to answer as best I can. Our organization would take any chip that it got and we would do our own analysis, and obviously we would not assume anything. We'd engage the manufacturer. That is our first thing to do on any such chip, especially of any kind of any significance of any size, and we would ensure that -- we want to make sure

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we knew where that chip was coming from, that's for sure, whether it was introduced from the manufacturer, like, it might have been from the initial manufacturer of that gearbox, but from the material and metal analysis of that chip, we're quite confident that we would be able to determine whether it was part of that gearbox or not part of the gearbox.

COMMISSIONER:

Q. I see, okay.

MR. BURT:

A. In that particular case, and again I'm only going from the readings, I haven't officially been briefed on it, but my readings of it as well is that aircraft had a system of magnetic detectors as well that didn't report anything, but it held chips away, and it was part of the gearbox, and that particular system was removed from all those gearboxes. Again to hold metal away and not report it is probably not a good thing, and they've since stopped doing that. So this just feeds into the picture. I would say, and I think I can speak quite confidently for our Director of

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Maintenance, that we would not have our aircraft flying if it had a chip light and not knowing where it came from. At the end of the day, I know that Mr. Pardy has made his unilateral decision to actually have a gearbox replaced when there's any question as to where that chip may have come from, and I think that's correct, Bob.

MR. PARDY:

A. Yes.

MS. FAGAN:

Q. For the record, Mr. Pardy is here to assist.

COMMISSIONER:

Q. Okay, thank you for that.

MR. BURT:

A. Hopefully that answers your question.

COMMISSIONER:

Q. Yeah. Okay then, we'll adjourn now.

(RECESS)

MS. FAGAN:

Q. We're going to start now with the video presentation on dispatch. It'll take a minute or so to load, but once it plays, then we'll do the questions.

COMMISSIONER:

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Q. Okay.

(VIDEO PLAYED)

Dispatch. The end of the maintenance work day signals the beginning of the operational work day at Cougar Helicopters, and a team of specialized personnel is already developing the days flight plans. Cougar employees and Transport Canada Type B operational control system or co-authority, which is a standard requirement in the airline industry. Cougar's use of co-authority exceeds regulatory requirements and is the first four rotary wing operator anywhere in the world. Co-authority gives the pilot and dispatcher on the ground shared authority on critical decisions regarding flight operations. In other words, the flight crews are not isolated when they leave the ground. They have an extra set of eyes monitoring every aspect of their flight. Co-authority means the dispatcher can actually turn the aircraft back, for example, if weather conditions offshore are deteriorating.

The co-authority dispatch systems are not typical for helicopter operators. Actually, Cougar Helicopters is the only rotary wing

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operator in the world that does a co-authority system. Actually, there's only three countries in the world that do co-authority dispatch, period, and that's Canada, the US, and China.

The flight dispatchers are also responsible for flight planning.

Doing a flight planning process usually commences two hours prior to scheduled departure of a flight. The dispatcher will start at that point looking at factors that are going to impact or could possibly impact that flight, and they could be anything from booked passenger load because if you have an increase of three passengers, that's more weight, that affects your flight plan. You're looking at weather systems, you're looking at winds aloft, icing conditions, low level jet streams, turbulence, airport suitability. You could have snow covered runways, you could have outages of different navigational aids that you have to take into consideration, and then beyond point "A" to point "B" flight planning you're doing, you have to have somewhere to go just in case you can't land at

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point "B", so here's point "C" being brought into it. So now you're analysing weather for another area of operation for your alternate airport. Now you have to keep in mind that that airfield has to be suitable for landing as well.

The flight dispatcher briefs the pilot and the flight plan is reviewed carefully to ensure the pilot agrees with the dispatcher's calculations. It's another example of co-authority in action. The pilot will also complete a risk assessment matrix.

When they check in in the mornings, they go through a process, what they call a risk assessment matrix, and they take into consideration weather offshore, winds, whether this is the first flight of the day or not, all sorts of different factors and at the end of the sheet, they total up the score and once they hit a certain number, it triggers them to say, hey, our risk assessment is a little on the high side. It doesn't preclude them from going flying. What it does, it says what should we really pay attention to today, we feel that our risk is too high here, so we're

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going to put the brakes on.

The flight dispatcher is a highly skilled individual who undergoes extensive training. The candidates must pass Transport Canada exams in air regulations and meteorology. Once hired, they undergo comprehensive training in company operations, meteorology, human factors, aircraft technical training, 300 hours of on the job training and more. Finally they must be monitored for a complete shift and orally tested by a Transport Canada inspector. If successful, the flight dispatcher certificate is awarded by Transport Canada, and they can begin their work. Even then the dispatcher must be tested every year by Transport Canada to renew their certificate. This training is so intensive because the flight dispatcher is responsible with the flight crews for making critical operational decisions. Their primary function is to help protect the safety of our passengers and flight crews. Safety at Cougar is a multi-layered process and co-authority adds another layer in that comprehensive safety blanket. Another key function in this

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department is the radio operator.

He's tracking the flight, making sure position reports are coming in on a timely basis, he's relaying key information to out stations such as oil platforms with estimated times of arrival, keeping our flight schedule up to date. You name it, if it's got to do with communication, the radio operator is the guy that's handling the communication.

They all work together in the operational control centre, or OCC, a sophisticated well equipped facility that is staffed 24/7 to service Cougar operations in Newfoundland, North West Territories, Nova Scotia, Greenland, Australia, and Alaska. The OCC is equipped with multiple viewing screens, touch screen communications consoles, VHF radios, and satellite phones. One projection screen tracks our aircraft and east coast support vessels. Another toggles between current and planned flight schedules, regional satellite and radar imagery, airport operational details and regional weather forecasts. As well, every Cougar helicopter is tracked in flight by an automated situational display called

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Blue Sky.

What it is, there's basically a transponder on every aircraft, and actually they're on the offshore vessels here on the east coast of Canada as well, and at certain time periods it sends back a position report, reporting its altitude, its speed, its current latitude and longitude. The helicopters generally report once every five minutes. If they're flying at lower altitude, like, say, 2000 feet above sea level, that rate increases to about three minutes, every three minutes we get a position report, and, of course, it does have an emergency button in the cockpit. If the crews depress this emergency button, which we take as a mayday call, it will increase a greater position report to once every fifteen seconds, so we have really, really good data on position.

The OCC maintains a visual watch over our bases using closed-circuit television. At a glance, we can see if a aircraft is out of the hangar in Louisiana, or if it is landed at Long Pond, where we maintain a fully functioning helipad as an alternative landing

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site. Our first priority is safety. So any aircraft in the air receive our undivided attention. Changing conditions can affect safety and may require flight plan changes literally on the fly. Flight dispatchers and flight crew never let down their guard and are continuously sharing information with each other. This process is called flight watch. We maintain constant communication with our aircraft using Sat Comm and VHF radio and utilize voice over internet protocol VHF radio systems to communicate with our bases elsewhere in the world. The OCC also has a dedicated emergency response area with access to accurate immediate situational information.

(VIDEO ENDED)

MS. FAGAN:

Q. Now a couple of questions on the dispatch system. This video showed how it works. Can you explain how the co-authority dispatch is different from a self-dispatch, because we heard that this is the only rotary operated air operator that uses the co-dispatch? So what are all the other rotary operators using?

MR. BURT:

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A. Well, all the other operators are using pilot self-dispatch. The pilot is responsible for doing the flight planning and all the aspects of the flight, and monitoring the weather, et cetera. The history behind this is important as well. The gentleman you heard talking about it, our chief dispatcher, Mr. Pinsent. I worked with him at Air Nova when I was flying for the airline, and saw that as a best practice. I flew it, I understood it, he worked there for 16 years with Air Canada, and when I came back to Cougar, it was one of the things that I wanted to implement in Cougar, and had the opportunity finally here in St. John's with a very sophisticated team that could help me do that. The difference is, and what I saw, was the added layer of safety and oversight a co-dispatch system offers an operator. When you have somebody that is trained and certified to monitor and help to plan a flight, look at the weather, help the flight crew conduct it, there's that wonderful added layer of oversight to the crew. So that's why we did it, and that's how it works. It works as a co-authority. So now we have a

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certified dispatcher trained in the performance of the aircraft, trained in meteorology, and taking all that information and together with the aircraft captain coming together and making that decision. As the flight progresses, you've got the dispatcher there working in concert with the flight crew.

MS. FAGAN:

Q. I understand that flight plans have to be filed with the air traffic controller, is that correct, or the airport, the air authority?

MR. BURT:

A. Yes, with the Transport Canada, yes.

MS. FAGAN:

Q. So is the -- with a co-authority dispatch, who is involved in that? I mean, you've said that they're both involved in planning the flight.

MR. BURT:

A. Right.

MS. FAGAN:

Q. You used the word "authority". Who has the sort of say in whether you're going to fly or not? How does it work?

MR. BURT:

A. Both do.

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MS. FAGAN:

Q. Okay.

MR. BURT:

A. Again the dispatcher will bring the information, he'll do all the calculation of the flight planning again with the experience he has, present it to the flight crew as you saw at the counter, and they'll discuss it together. If the captain of the aircraft sees an anomalies or has an insight as an aircraft captain to say, you know, I see what you're saying, but it's been my experience that we might consider to take an extra 20 minutes of fuel because this has been the trend I've seen at that airport, if we're going to use this as an alternate landing and plan to, when the winds are in this direction, it can change quickly. The dispatcher will say that's really good information, and they'll take that together and make a final decision. More often than not, the pilot validates what the dispatcher has done and there's very few changes done to that, and they move on. So that's practically how it works. The flight plan is filed by the dispatcher, to answer

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your first question.

MS. FAGAN:

Q. Okay. Do they both have to agree that the flight is going to take place? What if one says I think you can go, and the other one says, no, I don't think we should go?

MR. BURT:

A. That's a good question. There's a formalized process or arbitration in our manuals and in the whole concept of dispatch. That then is taken to the Flight Operations Department and the Flight Operations Department will act as an arbitrator in that dispute, and again it's a good question because it's well thought out and part of the basis of a dispatch certified system.

MS. FAGAN:

Q. Okay. Now this is certified. We've heard that there's three places in the world that use co-authority, and at the same time we heard that Cougar is the only rotary operator that's using co-authority. So would it be fixed wing? I mean, is it the airlines --

MR. BURT:

A. Yes.

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MS. FAGAN:

Q. It says three places, and then Cougar is the only one, so can you explain what's going on in the other?

MR. BURT:

A. It's Canada and the United States that use this co-dispatch authority.

MS. FAGAN:

Q. Is that for airlines or for helicopters?

MR. BURT:

A. It's for airlines.

MS. FAGAN:

Q. All right.

MR. BURT:

A. When we started this process there was no standard. There is no rotor craft standard for this, and that wasn't a good enough answer for us, it's just in our nature not to accept why they don't do that here. We said, well, what we'll do is we'll create it. So together arm in arm with Transport Canada, who by the way was quite excited about this in their regulatory world, together with us locked arms and said, fine, we agree with you, this is a best practice, why not have it in a heavy

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helicopter airline business, and they helped us walk hand in hand and developed the standards for this and it was a great process, and they were as excited about it as we were.

MS. FAGAN:

Q. So was it ultimately certified by Transport Canada?

MR. BURT:

A. Transport Canada did certify it through our operations manual and our procedures. Again they don't have any standards in the Canadian Aviation Regulations, but they did certify it through certifying our operational manual.

MS. FAGAN:

Q. Okay. We did hear on the video that there are a number of locations that are monitored, so the dispatchers in that centre look at more than just what's going on in the east coast and over the Atlantic. What activities are they monitoring? I mean, we heard that they're keeping track of the helicopter. Are they keeping track of anything else?

MR. BURT:

A. They're keeping track of our aircraft assets, obviously, in different locations; the Gulf of

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Mexico, could be the North West Territories, and in -- the other things that they're tracking obviously is the departure point weather, the destination, and you've heard this term, the "alternate", the insurance location, and all the weather in between, as well as from that regulatory authority there's a thing called a Notice to Airmen. If a navigation aid goes down during that process or before, they're also aware of that, and they'll bring all that information to bear.

MS. FAGAN:

Q. Okay. Who does the Cougar helicopter dispatcher communicate with? Does the dispatcher communicate with the pilot, do they communicate with Air Traffic Control, do they communicate with the oil rig, who talks to who?

MR. BURT:

A. Well, typically the dispatcher will be pretty well in touch with almost every aspect. He could be talking to maintenance in the morning clarifying whether there's a limitation on the aircraft through the minimum equipment list, he could make sure that the aircraft is ready

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for dispatch on time, he could be talking to the refueller, for that matter. Besides all the aspects of speaking to Environment Canada, getting the valid weather forecast and the actual weather, and then calling to the rig and making sure that we have the Environment Canada weather that is on the platform. That information is brought in, plus some additional information, such as the status of their helideck, whether they have sufficient fuel on board the vessel as well, and that their navigation and communication aids are all fully functional for the time the flight departs and when it's supposed to arrive. That's the wide group. Typically, he won't have to talk with air traffic control. That's a flight -- more of a flight function where the flight crew will talk with ATC, but he has full right to call them if he has any question regards to that flight. There's really no limitation from a dispatcher's point of view who he can speak to, but that typically is who he will speak with.

MS. FAGAN:

Q. Okay, thank you. You have a slide here, slide

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37, which outlines the training, because we did hear on the video that they are trained, but we didn't get the details -- we got some details, but I think there's a little bit more to the training than was necessarily discussed on the video. So could you go through the training and certification of the dispatcher, please?

MR. BURT:

A. Sure. I think again this is quite important point to realize when you hear the term "dispatcher", people can have a different understanding or connotation. In this case, ultimately a dispatcher is a Transport Canada certified licensed position. They have to go through and write a Transport Canada exam, pass it, obviously, and Transport Canada issues them a dispatcher licence. With that, they have to have the standard radio operator licence, and from a company point of view, they have to be familiar with our procedures. In fact, the dispatcher will go into a mandatory detailed and purpose course developed for them on aircraft performance. So they'll actually learn about the aircraft,

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and this is sometimes the surprising part, how the systems work, what are basic limitations of the aircraft. So this is actually quite a process they'll go through. They will talk about in our business the human factors and cockpit resource management, and all these things are very important to our business, as well as some of the ancillary stuff like the control of dangerous goods in an aircraft. These are rules that they are also responsible and to speak into. Specifically here on the east coast, we have a very detailed winter training program which we go through every year with our pilots, and our dispatchers are well aware of what the sensitivities are of flying in the winter conditions; icing, snow, high winds, ice on the ramp, and starting up and such. So the -- and as we talked about earlier, they went through -- they go through a long process of training, and once they are certified, again there's a recurrent. Transport Canada will come in every year, observe them dispatching a live flight, and then recertify them if they successfully conduct that process.

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MS. FAGAN:

Q. And I note here they say there's recurrent every three years, so there must be some type of education --

MR. BURT:

A. Right.

MS. FAGAN:

Q. Is that a refresher?

MR. BURT:

A. The ground school portion of it, yes.

MS. FAGAN:

Q. Human factors and crew resource management training, could you just describe that? Like, what is human factors?

MR. BURT:

A. Well, it really goes into a lot of the psychology of command and control, and it's very important when you're operating in a multi-crew cockpit to understand although you've got positions of authority, the aircraft commander, the captain, and a first officer, that the ultimate goal there is to safely operate that aircraft and do it in a very clear and defined manner. What this does it proactively addresses the issue that we

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have two people that have to work together and that there are human dynamics that we want to face up front. I might be an "A" type, he may be a "B" type, this is my position, and it really gets into the psychology of making the best decision and identifying, look, I may have the propensity to want to put my finger on this and control the cockpit, and the best thing in a cockpit is that everybody realizes it's the safety of the aircraft that's number one. So get into a little bit of detail, but it is important to understand that that human element is a key element when you're flying an aircraft.

MS. FAGAN:

Q. And so your dispatchers have some training in this area so that they understand that human dynamic because they're following this flight?

MR. BURT:

A. That's correct, and they also arrange the crew and they fly with each other, and if there are signs that a pilot may be stressed or whatever, they're trained to pick those things up because they are material when that flight leaves that they do that.

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MS. FAGAN:

Q. Okay, thank you. You have another slide with respect to the radio operator flight follower training, because in the video we heard about a radio operator, and I didn't realize until we were preparing for all this that, you know, the dispatcher and the radio operator are different people, different skills, and different roles. So could you go through their training.

MR. BURT:

A. Sure.

MS. FAGAN:

Q. And, you know, how they're different?

MR. BURT:

A. Sure, and outside of a radio licence, the radio operator is an asset at the -- for the dispatcher to perform those functions. So the radio operator will track the flight on the Blue Sky System. That provides us with a situational awareness of the aircraft. He will speak to the aircraft, if they have any needs. For example, if they said, you know, can you give us the latest weather for the FPSO, or whatever the case, they can request

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that and receive it, or whether it's, look, I'm just wondering do we have a second flight, et cetera, et cetera. They are an asset at the disposal of the dispatcher and such.

MS. FAGAN:

Q. And what type of training do they receive?

MR. BURT:

A. Well, obviously, they'll be briefed on the procedures in the dispatch system and the rules of the aircraft going offshore. Radio operations are emergency response plan should an event happen. These are the frontline people that will recognize it on the Blue Sky System, so they're trained in this emergency response manual, and a flow chart will go down through. If you have this, you go down through, and they need to know who to call and what to do immediately. These are our frontline people that are watching the flight.

MS. FAGAN:

Q. And I believe the Cougar Helicopter Emergency Response Manual is in full as an exhibit for those that want to refer to the actual manual.

MR. BURT:

A. That's correct.

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MS. FAGAN:

Q. As well, you've mentioned dangerous goods. What are dangerous goods and, you know, how does -- why does the radio operator need to know about dangerous goods?

MR. BURT:

A. Well, again it's being fully aware of what's being carried on the aircraft and the context of what's being carried on it. In some cases, an aircraft will be restricted as to where he can fly and what he can carry, and because he's involved to the monitoring of that aircraft, he should be aware of what that means on a flight if you are carrying dangerous goods, and act accordingly, especially again if you have an emergency response exercise, to understand what that may mean.

MS. FAGAN:

Q. Okay, thank you. Now you touched upon some of the information that a dispatcher has in making the flight plan. Your next slide, 39, I believe, covers the flight planning criteria and then we get into limits, landing limits.

MR. BURT:

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A. Uh-hm.

MS. FAGAN:

Q. So if you could go through what is the planning criteria when deciding on a flight.

MR. BURT:

A. Okay. As they start out in the morning, again the video did a good job referring to this actually, that they are responsible to make sure that we have a serviceable airworthy aircraft to present to the flight crew. They do check the weather both from Environment Canada, the basic terminal forecast for the departure point, St. John's, and also get the hourly weather and the forecast from oceans offshore, and it's important for them to understand that because we do have approach limits offshore. We do have criteria when we go offshore that we need to be able, at a certain height and a certain distance from the rig, to be able to see it to land. So therefore, it's quite important for the dispatcher to understand that.

Winds are always -- as we touched on earlier why they have a big effect on flight planning. They can make a big difference on

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how much fuel you need and they can make a difference on whether you can actually even effectively go do the flight. There is a point where you can land on an offshore platform, but it is -- it gets quite risky for a passenger to get outside of that. So it's quite relevant to understand that. There is a wind limit start up on the aircraft, no matter where they are, and again, that has to be monitored and make sure the flight crew know about that as well, and I said start up, but as well shutdown. You still have that same limit.

Destination condition, and this is also on route, if you will, because freezing precipitation is extremely important to us. While we're certified for flight into known icing conditions, we are not allowed to fly in freezing rain. There is a difference between that. And we have to make sure that we know that not only the destination but the on route and what's called the area forecast, that information is well known. I mean, the flight crew -- maybe at the destination may be reasonably good weather. At the departure

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point may be reasonable and there may be a front, as we quite often see here in St. John's on the east coast, that he has to go through and to go through that, you're going to go through a line of freezing rain, and there's some cases that we just won't go. That is a little difficult for folks that are on a platform saying, you know, "it looks great." Sitting back here, maybe even family saying "why not?" and we have this barrier in between. Well, it's our responsibility to say this is -- you know, this is information we need to know and we will not dispatch a flight through that zone. So just to elaborate on the importance of that.

Vessel motion. Well, that's our airport. We have a very unique airport. We land on, many cases, a moving vessel, a floating vessel, what's called a mobile offshore drilling unit, and Hibernia, we land on a gravity base structure, and they're all quite different. But those vessels that are moving basically are like an aircraft carrier or in some cases they move a little bit more, but we have to make sure that we understand what it

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is they are doing, what their limits are before we go, before we go offshore.

MS. FAGAN:

Q. And we've heard information about pitch, roll and heave. Is that what you're getting at when you speak of vessel motion?

MR. BURT:

A. That's correct, and it's also a rate of heave. In the last ten years, it's become very important, you know, so how much the heave changes, you know, metres per second.

MS. FAGAN:

Q. And how do you get that information, as to the pitch, roll and heave?

MR. BURT:

A. The information is sent to us from the respective vessel. They have very sophisticated equipment that reports that to the captain and to the weather observer, and then, of course, we have our own standards and guidelines in our company that we refer to and the pilots can refer to when heading offshore. In other words, they can't land outside of those parameter.

MS. FAGAN:

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Q. We had heard from the HMDC panel that on the Hibernia Platform, the weather observer provides weather information on the Platform, the weather on the Platform, their observations, back to Cougar Helicopters about an hour and a half before.

MR. BURT:

A. Right.

MS. FAGAN:

Q. Is that the same for the FPSOs and the mobile drilling units, and you just said that you get the pitch, roll and heave for the mobile and the FPSOs. How often do you get weather and do you get weather from all of them?

MR. BURT:

A. First off, it is standard to get that information about between an hour and an hour and a half before. It all depends sometimes. Somebody may be busy doing other things, but yes, that's a standard. We do get that full information package as soon as we speak to them, typically at that point we'll be in radio contact, and we'll get that piece of information for them and help us format a plan as we get ready for an approach, whether it's

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good weather or inclement weather, high sea states or whatever. It all goes into that picture that a pilot will put together in a plan and the name of the game in our business is that we always plan ahead. So we're never just basically taking the information and then going for it. It's always you have a plan, get a plan and go ahead. So that's why it's crucial to get that information. And I'm not sure if there was another question in there.

MS. FAGAN:

Q. No, it was just what do you get, which is weather and pitch, roll and heave, and how often.

MR. BURT:

A. Yeah.

MS. FAGAN:

Q. And I understand you get it fairly often, but at least an hour, an hour and a half before.

MR. BURT:

A. Right, and that they've got snacks and lunches ready for us.

MS. FAGAN:

Q. Okay.

MR. BURT:

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A. That's another one that we got to cover off there.
MS. FAGAN:
Q. On this criteria, you also mention alternate landing site.
MR. BURT:
A. Right.
MS. FAGAN:
Q. And the video did cover it, and I think in your fuel discussion on the specifications for the S-92, we did talk about the fact that you have to have fuel for the alternate landing site.
MR. BURT:
A. Um-hm.
MS. FAGAN:
Q. But I don't know if you covered the requirement, you know, what is this alternate landing site and I understand it is a requirement, and what are the alternate landing sites?
MR. BURT:
A. Right. The alternate landing sites go back to the discussion we had about instrument flight rules, and they're a separate set of rules for

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an aircraft that would go and fly in clouds. Fundamentally, the issue here is that you leave an environment where you're looking at the earth. You have no more reference to the ground and you're now in the cloud or above the cloud and you don't essentially, you know, know where you are, what the weather is going to be like. I shouldn't say you don't know where you are. You can't see by looking at the ground reference where you are. You have to rely on your instruments for your position and your navigation. And that's what we do. We fly offshore and we may not actually see anything until a half mile back from the rig. We may fly an hour and a half and that's how we do that flight.

Well, the regulator, Transport Canada says if you are flying under those rules, here's what you need to ensure the safety of the passengers, and our mandate, again the paying public, or that you must have fuel to go to your destination and if you are unsuccessful in landing there, you need to go to an alternate landing site, an insurance policy. And by the way, you must not only

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have fuel to go to that site, but we want that weather to be forecasted to be at an acceptable ceiling and visibility for your time of arrival should you miss at your destination.

So you can see they've got a lot of goodness in the fact that yeah, that's fine. You know, you're not looking at the ground any more. You might miss there and you need to go back somewhere where the weather is better at the forecasted time you might have to go there. That's an alternate landing site. I regard it, sort of a layman's term, as the insurance policy. Our intent is not to use it. Very rarely do we use it, but we do use it.
MS. FAGAN:
Q. And what are the alternates for Cougar Helicopters flying offshore Newfoundland?
MR. BURT:
A. The practical alternates are St. John's itself. So you can go offshore to a offshore location and you can come back to St. John's. Albeit, it's not the best weather place in the world. So what we did, together with the

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operators, and again, this was pretty innovative, but in the 80s, together with the offshore oil and gas operators, we developed our own alternate landing site in Long Pond, Long Pond, Manuals. Earlier in the 80s, it was Kelligrews. At one point, it was even Argentia. But that gives us another area to land and without getting into a protracted story, but the weather in that area has a bit of a microclimate. 60 percent of the time, the study we did, shows that the weather is acceptable as an alternate landing area where St. John's is not, and that was a study that the oil companies did do to validate whether that was a -- you know, as we kind of felt intuitively it was a good thing, they did validate that. That's why we built it where we built it, and it's about 12 kilometres -- 12 nautical miles away, and it has served us extremely well actually and it's both a day/night all-weather facility which we built, we control, we own and we recertify for applicability every year.
MS. FAGAN:
Q. So who maintains this landing site?

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MR. BURT:
A. We do. We do, yes.
MS. FAGAN:
Q. And if you can't land in St. John's or Long Pond, the other alternates would be where?
MR. BURT:
A. Any other airport that has, you know, weather reported there and suitable approach aids, such as Gander. We can use Deer Lake, Stephenville, as long as we have the fuel to go back that far.
MS. FAGAN:
Q. Okay, thank you. Now your next slide is limits, and we'd heard about, you know, weather information and the panels for the oil operators all discussed various limits that they have, sea state limits, and I understand for the aviation, it's flight limitations and flight limitations are different than some of the other limitations. So could you -- because some of the factors that may be relevant to the oil operation might not necessarily apply to an aviation operation or vice versa, and I understand at slide 40 and 41, you have described the landing limits for

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the helicopter. So can you explain what's in these two slides?
MR. BURT:
A. Sure. These are landing limits set based upon aircraft capability. It's also a function of individual, in some cases, operator limits because they may have some more restrictive limits. In other words, we may have them set here, but they say "that's great, we're just going to bring it down a notch." I mean, that is their prerogative to limit that. And when we do land on a moving platform, we categorize, you know, our limitations in two areas, the daytime and the nighttime. Nighttime is more restrictive because of the lack of references and landing on a moving vessel nighttime does have its own unique challenges, which again will reduce the, in some cases, the capability of landing offshore. For example, we have a chart up here that talks about pitch, roll and heave of a vessel in terms of day and night and the pitch, for example, on the S-92, daytime is five degrees. We can handle five degrees of pitch and five degrees of roll, left and

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right, and seven metres of heave. So again, the heave is quite important too because you realize your airport is going up and down seven metres. But one thing, again the last 10-15 years has really opened up in our business that rate of heave is just as important as understanding that there's heave at all, and that rate of heave say that it's -- - our limit is 1.5 metres per second daytime. And all this information has been sent to us. It's sent to us real time, even on approach, and so we have that information to make sure that we are landing under acceptable terms on a moving vessel.
MS. FAGAN:
Q. Thank you. We can see from this chart that the limits and numbers for the nighttime are almost half. For the timing of the heave, it's a third, but they're significantly reduced if you're trying to land in the night.
MR. BURT:
A. Right.
MS. FAGAN:
Q. Now as I understand it, these are the limitations for the helicopter. This is what

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the helicopter can land on.
MR. BURT:
A. That's correct.
MS. FAGAN:
Q. Each one of these helicopters. The oil operators themselves may set different limits, but as far as the capability of the helicopter, this is the limit for the helicopter.
MR. BURT:
A. The limit that we have set here is the limit determined by Cougar Helicopters. That is our own risk assessment and some of the oil companies -- for example, somebody may come in here that's not familiar with the east coast of Canada and have some different limits which are either more restrictive or more conservative, and we will obviously educate them to say that as an operator, we won't operate past this limit and we've never had any resistance to that. That's more of a form of education, and if they want to be more conservative, then obviously, yes, we will respect that obviously, and that doesn't happen that often, but it does.

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MS. FAGAN:
Q. Okay. Now there's another slide here. This one is entitled basic offshore landing limits, and slide 41 is the landing limits for the Terra Nova FPSO, and I understand they're different. Can you explain the difference and why?
MR. BURT:
A. Well, it goes back to managing our business. The FPSO Terra Nova has some very unique dynamics by the nature and the structure of its hull. It's a large vessel and what we've learned is that although it does have a heave value that it is a very, very slow rate of change for heave, and so we have done our risk assessment and you'll notice for the 92 that our daytime limit is up to 12 metres of heave but it is at one metre per second. So we've taken the actual dynamics of our destination, analyzed it and applied these limits appropriately and I think that's a very judicial way of managing our business. So that's reflected in this specific chart.
MS. FAGAN:
Q. Okay. So the basic heave in the day for the

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S-92 is seven metres.
MR. BURT:
A. Yes.
MS. FAGAN:
Q. But it's a faster -- the limit is seven metres, but at a much quicker rate and what I'm hearing is because the FPSO Terra Nova has a much slower rate -
MR. BURT:
A. Right.
MS. FAGAN:
Q. - you can take -- the helicopter can take more of a heave, more distance, because it's such a slow change?
MR. BURT:
A. Correct, and we specify that by one metre per second. But you do notice, when it goes to nighttime, and again, we're getting into the details, it is a bow-mounted or front-mounted helideck and there's some particular considerations on reference and visual cues that's taken into consideration and it's actually reduced by, you know, right down to six metres.
MS. FAGAN:

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Q. Okay. Thank you.
MR. BURT:
A. I think it's just a sign that we're managing our business well.
MS. FAGAN:
Q. The next slide -- now before we move to this slide actually, I have one more question and it has to deal with night flights and then I'd like to deal with the Blue Sky. So there's a couple of questions on night flight, and we heard a lot of discussion in the earlier presentations about night flights, and I'd just like to hear the night flight situation from Cougar Helicopters' perspective. So how many night flights has Cougar Helicopters conducted, say, in the last year? And I don't need a precise number. I just need a sense as to how many night flights we're talking about.
MR. BURT:
A. Mr. Williams is going to be handling this section.
MS. FAGAN:
Q. Yeah, okay.
MR. WILLIAMS:
A. Okay, in the last year, I would estimate an

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average of about five percent of our overall flights is conducted at night.
MS. FAGAN:
Q. Okay, and what is considered a night flight? Like what's the definition of a night flight?
MR. WILLIAMS:
A. Our definition of a night flight is a half hour before sunset and a half hour before sunrise.
MS. FAGAN:
Q. Who decides when a night flight is going to be conducted or maybe tell me the decision process?
MR. WILLIAMS:
A. Okay. For the definition of flying, as Rick just outlined in the criteria, whether it's a day flight, night flight, all that criteria must be met from Cougar's perspective to fly a night flight, meaning the weather is assessed, the offshore locations and as Rick just mentioned in his last two tables, taking into consideration that there are lower limits at the destination at night. Cougar has no different flying procedures at night or day. That's consistent across the board. But what

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has happened in our post return to flight, since -- on May the 18th, is that the operators have developed some of their own criteria that they help manage their flights and whether they want to fly at night. Cougar will assess whether a flight can meet all the criteria from a dispatch point of view and let the operator know, yes, we can do this flight, and then there's certain criteria that they decide whether they want to avail of that flight or not.

MS. FAGAN:

Q. Okay. So once you've looked at the criteria, as Mr. Burt just laid out, what the dispatcher goes through, once all of that has been met, then you would, I guess, refer to the oil operator and say "now, we're able to fly. Do you want us to fly?"

MR. WILLIAMS:

A. Yeah. If there's a requirement for a night flight, as I said, our dispatcher will determine first if a flight can safely and legally fly offshore. The operators have asked us to take a look at a couple more items as part of a check sheet. One is the

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availability -- not the availability as much as the status of 103. Is 103 serviceable? Are they on a mission? Are they training? And we will report that back to the operator of the status of 103. Another thing we've done is we will always have an on-call crew member at the facility any time our aircraft is flying. Internally, which is not a part of our business, each individual operator will assess the need for that flight. Is it a priority? What's the weather going to be like in the next four or five days? So basically, once Cougar has met all their criteria, our traffic centre will deal with the logistics individuals from each individual operator and then they make a determination whether they want us to proceed with the flight.

MS. FAGAN:

Q. Okay, thank you. The next slide is 42 and this is a screen shot of the Blue Sky. We saw this in the video, but it was a little grainy and I think a little difficult to see the figures on the screen. So what I would like -- and I think Mr. Williams is going to take care of this slide. Could you just describe

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for us what we're seeing on slide 42? What information does the Blue Sky system provide?

MR. WILLIAMS:

A. Okay. As you saw in the video, this shot, the screen shot you see here is part of the display unit in the operational control centre. Basically the Blue Sky system is an an iridium satellite communications network and there's a transponder in all of our aircraft as well as the supply vessels for the oil companies. So it's giving us back information such as position, altitude, speed, heading, that type of information, and I think our chief dispatcher, Danny Pinsent, reported that we have certain criteria set up for reporting. If an aircraft goes below 2,000 feet, it reports back every two minute intervals, and I think one thing that's very important about the screen, that in the OCC, if there's a position report that's missed, we call an inactive alert, that there's both audible and visible actions that will pop up on the screen that people can notice that, take attention of that flight and you need to follow it.

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MS. FAGAN:

Q. Okay. We have a white box in the middle of the screen, and would that be information with respect to a helicopter or a vessel?

MR. WILLIAMS:

A. Yeah, that is a helicopter, and in our operational control centre, if you lay your cursor of your mouse over any asset, basically it will come up with a display box for you. This display box you see here shows the aircraft registration. It shows the speed, the altitude, its destination, where it's going, and the most important key function that it displays is the lat and long of the aircraft at that given time.

MS. FAGAN:

Q. It also has a fuel indicator and the arrival time and the people on board. So the cursor is placed on that and then you can see what's going on with that asset?

MR. WILLIAMS:

A. With that asset.

MS. FAGAN:

Q. We also have a number of other little items on the screen, different coloured items and

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unfortunately people who are viewing this over their web may not be able to see this screen, so can you describe what else is being monitored? You know, we have the helicopter, but is there anything else being monitored?

MR. WILLIAMS:

A. I guess, if I can say the services that Cougar offers out of the OCC on behalf of the oil companies is we track their assets. Their assets being their people, their helicopters and their support vessels. We have a regulatory requirement for the flight following or position of our helicopters at all times, and that's what I described about the position reports have come back. But in conjunction with the operators, we thought it was very prudent that we use the same system to track the supply vessels. The supply vessels, we're not tracking them because of regulatory requirement. We're tracking them on the basis of an emergency response situation awareness tool and that's the other areas you see there is the actual vessels for the offshore oil companies.

MS. FAGAN:

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Q. Okay. Does Cougar Helicopters track other commercial vessels? You mentioned the supply, but other commercial vessels or fishing vessels?

MR. WILLIAMS:

A. No, Cougar does not.

MS. FAGAN:

Q. Okay. What was used or how did Cougar Helicopters keep track of where their helicopters were before they had a flight tracking system?

MR. WILLIAMS:

A. Before we had an automated flight tracking system, again the regulatory requirement was still there to report back a minimum of 15-minute intervals. So we were using all of the necessary telecoms on the aircraft, either VHF radio, basically radio communication back to dispatch centre.

MS. FAGAN:

Q. Okay, thank you. That is the end of the questions for this. Now we have a video that deals with flight operations and some questions, and I think we have enough time to play the video and at least get into the

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questions. We may not finish all the questions, but we're not due to break for almost 25 minutes. So if we could have the video that deals with flight operations, please?

(VIDEO PLAYED)

Flight operations. The helicopters have now been towed from the hangar. Once the fuel supply has been tested and each aircraft fuelled, they are then ready to go to work. After receiving their briefing from the flight dispatcher and completing their pre-flight risk assessment, the pilots are set to begin their next flight.

Flying helicopters in the east coast offshore is a demanding occupation. Most pilots will have already earned their airline transport pilot license or ATPL and their instrument rating from Transport Canada before coming to work with Cougar Helicopters. If they haven't, these milestones must be achieved during the early months of training.

The old saying applies where we believe we can train most pilots to do most things, but you know, the attitude is what he comes to

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the door with. So we'll hire a certain attitude and provided there's a certain amount of experience behind that, we can train in the skill. So hire for attitude, training for skills and we'll go from there. So we have the two classifications, first officers and pilot in command, or we call captain. All pilots are hired as first officers first and then they progress to captain, and depending on where they are in their experience, they'll progress quicker or slower. Our entry requirements for first officers or co-pilots is normally around 1,000 hours. More important than the hours is exactly how he achieved -- he or she achieved those hours, whether that being all in one type of operation, flying small helicopters or perhaps flying a different kind of multi-crew operation where there's two pilots, which is very important to us. That'll carry more weight. But that really represents a pilot's career up to that point and it may be anything from five to ten years for a pilot, depending on how fortunate they are to get a high flying job initially.

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No matter what their experience, all new pilots start with a six to ten-day company indoctrination focusing on Cougar processes and procedures, followed by one month of flight simulator training. Simulator training puts the pilot in highly realistic situations where they learn the fundamentals of helicopter flight and how to respond appropriately to a wide range of emergency scenarios.

Simulator training allows us to put the pilot in real situations. If we were to train in the aircraft, we would absolutely just simulate training. For instance, I would say "pretend I am closing down one engine now" or "pretend that light is on" and carry on with the exercise and you kind of have to remember the light is on. It doesn't show, but it's on. It's just false. When you go into the simulator, you don't have to say anything of those things. You simply let the crew do their thing and you actually turn on a light or you fail an engine or you make it night or you make it foggy or you make it icy, and they have to deal with it and you can see how they

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deal with that, and one of the important things as well is that there are certain things that are simply too dangerous to do in an aircraft and those would be a dual engine failure, auto rotation down to the ground, and actually land the aircraft, ditching, which we practice all the time and be able to land the aircraft following all the procedures into a simulated ocean.

This is then followed by check rides and flight tests and a week of survival training. At this point, the pilot can now begin flying with passengers as co-pilot under the supervision of a training captain. Training and experience is enhanced through an alternating seating system in which the captain and co-pilot trade seats after ever flight.

The traditional role of a captain in a fixed wing aircraft, you'll find him sitting in the left-hand seat and the co-pilot sits on the right-hand seat, and until you upgrade to captain, you don't move out of that seat. Having said that, I'm also aware that certain helicopter companies operate that way. The

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amount of instrument approaches we do offshore was probably -- they were probably the driver behind it initially, where the captain wants to be in a seat that gives him the best opportunity to make a decision, stand back from the situation a little bit, look at the flight, look at what needs to happen and can make a decision. It doesn't mean he actually has to fly or she has to fly the helicopter, and in many cases, that's actually a negative. Hand flying part over to the first officer, the captain makes the decision making part and do the radio calls perhaps, and maybe that's better for that day. It's not so every day. In that regard, when some of the rigs that we got to fly to, the offshore installations, maybe that forces you into a seat that the right-hand seat pilot has to land or tomorrow, because of the wind, you may have to be in the left-hand seat to do that landing. Well, that lead us to the situation where a captain needs to look at the flight before you go and say "well, today's best success, I may have to end up in the left on the right-hand seat" and we just evolved with a system whereby we simply

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just change seats, unless there's a compelling reason not to, because of the complexity of the day's mission. The advantage of that is the day that the captain gets -- or co-pilot gets upgraded to a captain, he simply is so used to that seat, there's no seat -- he know how to fly from there. He knows how to look out the window for landing and take off in that seat and the instrumentation certainly isn't different. So it works for us and I think we get the benefit from that.

However, the training never ends, even for a captain. Every year, all pilots must take ground training and simulator training to keep their skills sharp and ready to respond to challenging situations.

The Sikorsky S-92 carries a highly sophisticated multi-purpose flight recorder or MPFR. The MPFR system records every detail of each flight, including instrument readings, control adjustments, voice data and external factors like weather conditions. At the end of every flight day, Cougar avionics downloads the MPFR data and transfers it to the helicopter flight data monitoring workstation,

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where it is processed and analyzed to identify any standard operating procedure or SOP exceedances during the flight.

The whole purpose is to measure how the flight is flown and to make sure its within the Cougar SOP, which is how Cougar wants the helicopter to be flown, and there's specific procedures for landing and take off and rig landing and rig take off, and I would watch, especially a rig landing, to make sure that the air speed and altimeter and all the instruments are within the SOP limits. One of the benefits of HFDM is that any pilot can come in and animate their flight. They come to the HFDM office and we can analyze the whole flight or a portion of and zoom in on the approach and change the orientation or angles just to give them a little more information.

"Hi, Cat. You got a minute?" "Yeah, sure." "Did a flight yesterday morning on 221. I just want to see if I can see the last portion of it." "Okay." "That's the portion I was looking for here, as we come in over the deck. I just want to see what the noise did

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as we pitched down."

We use that data to do quality control of the flight, of each flight. It's not a case of somebody forgetting a small little detail. Well, that light came on, or the wind blew us a little bit off track and then I made that correction. Now we can look at that and say precisely how you dealt with that situation. It is a tool to adjust our training. So when we say quality control, we measure it against our two standards, the flight manual, the standard operating procedures. We look for deviations. We feed those deviations back into the training program and we adjust, and so we go back to the simulator and say no, adjust the training for this specific item where we saw an anomaly and then we'll monitor it again. So we close the loop on quality. It gives us the comfort that we know precisely how people are experiencing the aircraft and the offshore environment.

Cougar Helicopters exceeds regulatory requirements with the HFDM system, which is not mandated by Transport Canada. HFDM was adopted voluntarily by Cougar as another way

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of ensuring safety and quality.

(VIDEO ENDED)

MS. FAGAN:

Q. Okay, now I think Mr. Burt is going to start with, at least the first few slides in any event. The first thing I would like you to cover is the air operator's certificate, because this aspect really deals with your ability to fly and I understand Cougar Helicopters does have an Air Operator's Certificate and the certificate has been presented as an exhibit. Could you just tell us when Cougar Helicopters had their initial air operator certificate, has it continued and the process?

MR. BURT:

A. Right, again contemporaneous with our AMO, our maintenance one, our air operator's certificate was achieved in 1984, and that certificate, like the maintenance operation evolved and matched our operation. For example, in 1989 we upgraded the certificate to include international and that's when we went and flew offshore oil support in Spain, I think, in 1990, so it did evolve and as we

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went on and on, it stayed intact, it's always been intact, right since 1984, but we've made amendments to the operations manual: what we do, what aircraft we have, where we fly, some very unique things, like our dispatch system we spoke about and our operatings limitations and specifications in the manual.

MS. FAGAN:

Q. And this certificate is also issued by Transport Canada, is that correct?

MR. BURT:

A. Absolutely and it's stamped as certified, as you saw earlier as well.

MS. FAGAN:

Q. Thank you. Now the pilots, we heard some information on the pilots but, like the maintenance and the dispatch, they are key to the operation, so we have a few slides here on the pilot qualifications and the training, so could you take us to slide 45 and Michael Stephenson of Transport Canada did go through some of the requirements to become a licensed pilot, but could you look at this from Cougar's requirements as to what Cougar would consider on a resume or what you'd want to see

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in hiring a pilot?

MR. BURT:

A. Right. These requirements again are required by Cougar, but sometimes they are even enhanced by some of the operators we fly for. They do have some particular requirements, they may vary this many hours, that many, but this is the generic written one that would answer your question. Flight crews that come to us require what is called an airline transport pilot license, ATPLH in this case, for helicopter, or a commercial license with the written exams complete.

MS. FAGAN:

Q. So what's the basic, because is there a level--an earlier level -

MR. BURT:

A. Yes, commercial is the basic and, of course, that would only work for a first officer.

MS. FAGAN:

Q. Okay.

MR. BURT:

A. And not for a captain. They also as we go back to that term "instrument", they need a group 4 instrument rating. That instrument

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rating is achieved through certification, an award by Transport Canada, they have to complete a course, write exams, do a flight test and they receive an endorsement on their license by Transport Canada. I think on the film we saw, the director of flight operations mentioned that we have a minimum of a thousand hours, that would be the minimum, we do get some crew that come in at 10,000 and 12,000 hours, but that is certainly our minimum. Then beyond that what we look for, from enhanced capabilities, is a multi-crew, we talked about the value of multi-crew operations. Typically you'll find multi-crew in multi-engine, typically, not as guaranteed all the time. So the military, very good source of multi-crew, the Sea King, the Rescue 103 on the Cormorant, for example, air ambulance operations, again, are multi-engined, multi-crew and both of those also will come with that IFR or that instrument experience as well. Offshore military experience, as we talked about, is highly favourable and then the harsh weather environment, the east coast, so you can see

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we're having folks from Gander Rescue 103 or Shearwater from the Sea King environment there or air ambulance in this area are very, very valuable for us.

MS. FAGAN:

Q. Okay, now once you accept a pilot at Cougar, what is the training--and we've had some information on the training, I think the video did a pretty good job of going through the training, but there's a few areas that were not covered, so could you bring us through the training?

MR. BURT:

A. Sure. Once a pilot is hired, obviously we go through several different steps and they may go out of order a little bit, depending on where the person is and where they're coming in, but they will have to go through a company indoctrination training and that is a familiarization of our operation's manual and that's our Bible, all aspects of it. They'll go through the familiarization of our standard operating procedures, our winter training procedures, special operating procedures that we do have for approaches to oil rigs,

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approaches in inclement weather, familiarization with our personal protective equipment, they're briefed on emersion suits, there's special equipment that they have to perform their job. And then, of course, they will eventually have to go and take the aircraft specific training and that means going to the S-92 training facility. Now there are, the primary one is in West Palm Beach, but there is another one now in Farmborough and also in the Gulf of Mexico. But our primary training facility is in West Palm Beach, they'll go there and they'll perform a ground school of about two weeks learning about all the systems in the aircraft and integrated in that, they'll start doing some flight simulator training. In most cases, obviously we're talking about an initial course and this initial course can take up to 20 hours of flight training, anywhere from 16 to 20 hours. In that simulator training, it's quite extensive, by the time we're all done, it's about three weeks and you're basically doing a full ten hour days in that facility. But obviously the

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type of training is also, for a pilot, it is a pretty exciting opportunity. We go through all the emergency procedures and understand what is going on on those systems and we also have at Cougar, as a reality of where we work, some very special operating limitations here that will allow us to fly in the weather that we do. That requires specific ground and flight training and those items are the low visibility approaches and take off limits that we have here for the St. John's airport. We have a very specific offshore rig approach that we fly and certify every year in the simulator, and we have the global positioning satellite system, the GPS approaches that we have as area Nav or R Nav and we require both ground and flight and flight certification for those. To maybe the softer side, we talked a little bit about the two areas which specific training that's required, it's called controlled flight into train, in other words, you know, some of these lessons that we've learned in the past are now translated into proactive learnings. That, on top of this crew resource management, now this is again

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very important because working with -- the human factor in this aircraft, you know, they say it's the interesting link between the collective and the cyclic and that's the human that we're dealing with here is so important, it should never be left out, never be forgotten, so this is a focussed training on the crew, crew dynamics, how to work with the crew. We just don't sit in a room and say "do this", you know, be aware he can be like that and if he says that, don't get upset and that's pretty germane but it's not how we integrate it. We integrate it in live training in the simulator, so we'll do crew resource management training as we are learning how to fly the aircraft. For example, how is that emergency, simulated emergency or in the simulator, the actual emergency, how did you handle that? And you'll talk about how the crew called for the checklist and how he handled it here and they'll say, now, what you might have done here is you could have given him a heads up and said why don't we think about this and that's how we would integrate cockpit and crew

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resource management.

MS. FAGAN:

Q. There's also a note here "Transport Canada check ride."

MR. BURT:

A. Right.

MS. FAGAN:

Q. And you've referred to check ride a few times, but I don't know if it's been explained. I think Michael Stephenson might have--everybody talks about it, but what is a check ride?

MR. BURT:

A. Check ride is where a pilot's heart comes through his chest, it's at that time when you are tested and Transport Canada takes full oversight and awards those licenses, if you're successful. Transport Canada will sit in the aircraft in the jump seat or in the simulator, I should say, the simulator, and watch you conduct a flight and that flight has very strict parameters, you must do a take off, you must do an en route segment, you must get established en route, you must do emergency procedures, instrument holding procedures and these are procedures that Air Traffic Control

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would expect you to, and that's the contract with that agency. Deviations in altitude air speed are all predicated on that check ride. You'll come back, you'll do approaches, they have to be successful in instrument conditions and mis-approaches as well. All those aspects are done on a flight check which usually takes about an hour and thirty minutes, or hour and forty-five and then the Transport Canada inspector will leave and brief the crew and say congratulations, sir, you've got your type certificate either on the aircraft and a separate validation of your instrument skills. So there's really two things that's going on. He'll validate your type, the S-92, let's use that aircraft, yes, you're certified now to fly that type of aircraft; and No. 2, your instrument certification is also valid. So there's really two things going on in the way that we do our flight tests.

MS. FAGAN:

Q. Okay. You have mentioned that the check rides are, they're conducted by Transport Canada and that's often in the simulator. You mention simulator training, is simulator training

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required by Transport Canada?
MR. BURT:
A. No, it's not required by Transport Canada. It has been an absolute tenant of our individual company since 1989. I think we're very proud of that; however, what I will do is state that I have to put a hand up and say that all the operators we work for here on the east coast of Canada has put it in as a basic requirement, if you're to bid their work, you must have and complete your training on a full motion certified flight simulator device. And I have to say that's not the case around the world, but it is the case on the east coast of Canada and that has served us so well here to have the highest level of standard of training available to us.
MS. FAGAN:
Q. And where is the simulator?
MR. BURT:
A. West Palm Beach is the one that we mainly go to, but we have gone to Farmborough and we checked out that new facility, so we've got some extra capacity if we need to in the Farmborough area when it comes to developing

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our procedures and such. There's a couple of areas I didn't touch on, but you know, we do have to have specific area training. If we go to St. John's, you have to be trained there in St. John's and the peculiar areas about this area and their ATC procedures and I touched on our winter operations, again are very important. We go through the basic survival training, like everybody else does, we have the initial and the recurrent and it's just like everybody else that goes offshore.
MS. FAGAN:
Q. We've heard about the five day BST, so is that the course that you--when you say you have the training, it's that same basic survival training course?
MR. BURT:
A. That's correct, yes.
MS. FAGAN:
Q. And that's for your pilots.
MR. BURT:
A. Dunker training and everything, yes, and we do have occasion, actually it's a very good feedback, when our pilots are in, we'll actually talk to the crew and the other

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passengers that are going through and just talk about some dynamics and that and it's actually a very good exchange.
MS. FAGAN:
Q. What about the recurrent, because we've had information that there is a recurrent course. Does the pilot have to do a recurrent course and is it the same as the other course that's done by the passengers?
MR. BURT:
A. Yes, they do a recurrent and it's the same.
MS. FAGAN:
Q. I have a few questions on some of the equipment that is used by the pilots and the suits, so I don't know, Commissioner, if you want to take the break?
COMMISSIONER:
Q. All right then, we'll take a break now.
MS. FAGAN:
Q. Okay, thank you.
(RECESS)
MS. FAGAN:
Q. Now, I just have a few more questions with respect to pilots. You have provided a lot of information about the pilot training and the

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number of hours and the various credentials that your pilots have. We had heard earlier that there was a personal on board management system, there's a, you know, a system at Cougar that keeps track of the passengers. Where do you keep track of the pilot's credentials? Is it in that system or is it in a different databank? How do you know if your pilot's credentials--if they've had their ride checks and that type of stuff.
MR. BURT:
A. All the pilot's credentials and their training data when they receive their training is all kept in a Cougar system called FOIMS, it's Flight Operations Information System, and this is a system, as I say, we have a very robust IT department and programming department here in St. John's. The system was developed by our flight operations group and some other folks who use it to be very detailed and specific about our requirements and that's where it's kept.
MS. FAGAN:
Q. Okay, and what about the passenger, the POB system, so the information of the pilot's

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credentials are kept in your own system.

MR. BURT:

A. Uh-hm.

MS. FAGAN:

Q. Your own Cougar operating system and what about the POB system, is any pilot information kept in that system?

MR. BURT:

A. Just the essential information on that, just next of kin, yes.

MS. FAGAN:

Q. If they happen to be on flight -

MR. BURT:

A. That's correct, on that particular manifest, yes.

MS. FAGAN:

Q. They departed--okay, so the information of the pilot, on the pilots for a particular flight would be in the POB system from a flight manifest perspective.

MR. BURT:

A. That's correct.

MS. FAGAN:

Q. But their credentials, such as did they have the BST or do they have their check ride or do

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they have certain credentials, that's in your own -

MR. BURT:

A. That's in our flight operations information system.

MS. FAGAN:

Q. Okay, great. Now on the equipment that the pilots have, we heard a lot of information about the suits that are worn by the passengers. I understand that the suits worn by the pilots are different. Can you describe the suits that are worn by the Cougar helicopter pilots?

MR. BURT:

A. Sure. The suits that the flight crew use--that I've used my whole career are, first of all, the requirement by Transport Canada is that we provide a suitable protection from hyperthermia to our crews, that is a requirement by Transport Canada and that is our authority. What we have done, just recently actually, is we did an analysis as to what would be the best suit for our operation and what we did is we did a global search of suit suppliers. We had a criteria that we

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were looking for and then we did an industry best practices search as well with other operators, and we took that whole process and distilled it down into our selection, which was quite, quite firm and we selected this suit by Viking. Now the suit is a dry suit first off and it is built to function in a cockpit, a helicopter cockpit. Let me explain that. We have our flight crew in that cockpit which is largely a full glass enclosure or Lexan enclosure, and they'll be in there for up to eight, possibly nine hours a day and that's where they work. So that also can provide a lot of heating and that stuff, so you have to have something, number one, that can accommodate that environment. Number two, is that we have aircraft controls and switches and when it comes to having gloves hanging off the side of your sleeves, you have to have a very clean sleeve that when you go touch something or you make a movement on a control service, you don't hook anything up and we've done a very detailed survey in our cockpit to make sure that we do not increase any risk by hooking up on anything. So it is very

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important for us. We've also integrated all the other aspects of the suit and anything on it for, not only cockpit orientation, but also egress. So for us it's a purpose-designed suit for a purpose, a very specific job.

MS. FAGAN:

Q. The issue also came up as to whether or not the pilots wore helmets and do the pilots with Cougar helicopters wear helmets or not?

MR. BURT:

A. The pilots wear both, they wear headsets and some pilots wear helmets. The background behind that is that we've had crews come from different disciplines, such as some crews came from Search and Rescue or the Military and it's their function, based upon the job that they've had in the Military that they said look, I've had this, I'm comfortable with it, I'd prefer that and they've asked us would you mind if we did wear our helmets and, you know, we looked at our company core values, our company culture and we saw no reason as to not to oblige them on that and support them. So it doesn't make one thing safer than the other, we're flying, again, as an airline

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standard, so we were accommodating with our crew, so we do have a mix of both.

MS. FAGAN:

Q. Are there any floatation devices or life vests that are provided to pilots?

MR. BURT:

A. Sure, and of course the life vest is a Transport Canada required item, so we have sourced a life vest that works with, again, very carefully works with this suit and made sure that it is compatible and we procured that and implemented it as part of our PPE for our personal protective equipment for our flight crew. I will also say that what we have provided for the pilots is an element of, number one, is the dry suit emersion suit coverage, but we've also provided a flame barrier as well. We have a Nomax flight suit that we provide and the suit and emersion suit and the flight suit are items that we mandate our crews wear.

MS. FAGAN:

Q. So is the flight suit required by Transport Canada?

MR. BURT:

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A. Not that specific flight suit, but adequate protection against hyperthermia, yes.

MS. FAGAN:

Q. Okay. Personal locator beacons, do they have any type of beacon or strobe lights, any other sort of -

MR. BURT:

A. Yes

MS. FAGAN:

Q. - identifiers in the event they need to be found.

MR. BURT:

A. We do have personal locator beacons for our crew and of course, there is a beacon on the lift vest as well, a visible flashing beacon.

MS. FAGAN:

Q. Okay. Emergency breathing apparatus, now the workers travelling offshore have recently been provided with a HUEBA. I understand that that's a particular name that's been adopted by the oil industry on the east coast. There is a more generic form, the emergency breathing apparatus, and do you provide your pilots with such an apparatus?

MR. BURT:

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A. I'm fortunate that we have Mr. Banks here. He did the analysis and he's been involved in the implementation of that, so I think I'm going to take advantage of that and just let Rick speak to you about the process that he's gone through and where we are with that.

MS. FAGAN:

Q. Okay, thank you.

MR. BANKS:

A. Okay, just to reiterate and step back a little bit, what Rick was trying to get at obviously was upfront in the confines of the cockpit we try and streamline our air crew. There is just too many smaller issues there going on that the bigger suit, the more cumbersome, everything that we looked at and assessed and did risk assessments on and went out as far as Norway on some of these aspects to get the best equipment we could, was the streamlining effect with quality gear. So, you know, going into the vests, you know, the suits, everything is tracked through our LETS tracking system as well, which is a Lifesaving Equipment Tracking System in house. So the safety department is taking care of all of

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this, as well as bringing in experts from their various fields to get these types of equipment, so the breathing apparatuses that we've gone to, although I sat on the HUEBA task force while it was going through for the passengers, we went to a different model, again streamlining for upfront, it's called HEEDS, which is Helicopter Emergency Egress Device. It's known around the world, again largely used for air crew, not passenger and it really--when it came to selection, the best thing I can say is it's a smaller two pound scuba bottle, if you will, with a regulator built right on the top. There's no whip effect like the passengers have that runs up, you know, built right into the suit. We don't have that luxury when you're in the cockpit, we need something that cannot hang up whatsoever in the confines of the egress situation, so to us and in talking to many operators that use these down through the States, Sheriff Department, Rescue, some of the military as well as JTF2 -

MS. FAGAN:

Q. What's JT -

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MR. BANKS:

A. Joint taskforce to military, anti-terrorism group and when dealing with some of these entities, you know, we found that to be the best selection for us and the proper gear. If there were issues, the bottle can be dumped, as long as the air crew got a couple of breaths, enough to get out and surface. That's the requirement that we're after is to get a couple of breaths, those much needed breaths, once the window is pushed, you've got that extra bit of air after the cold induction of the water and the gasping. So, you know, it turned out to be a valuable piece of equipment and I can say now that training has been occurring in the last month, month and a bit from survival systems, has been over in Halifax, our last training is tomorrow. They are ongoing today in the pool with the sweat chairs, putting all our pilots through or air crew and dispatchers and rescue specialists and it will be on line the 8th, which is next Monday. Once the bottles are replenished after tomorrow's training, we're implementing and full bore through all our operations, not

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just St. John's, but our Halifax group will be complete as of tomorrow and then we're moving it down to the Gulf of Mexico, so again our standardization of such an apparatus is going to work right through all of our operations.

MS. FAGAN:

Q. Now when you say the whip effect, we had the breathing device that is used by the workers here and it was a canister with a tube and then the regulator was at the end of the tube. I take it from what you're saying is the tube is not a feature of the device that is going to be used by the pilots and anybody who looks at the various options, you'll see that there is an option where the regulator is attached directly to the canister and there is no cord or tubing, so is this the one that you're talking about, the one where the regulator is right on the canister so there is no tube to get caught in any of the switches that's in a cockpit?

MR. BARNES:

A. Yes, and I think you've got to understand too we could not build that into the suit, there's nothing wrong with that device, it just opens

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up one element of risk to us not having it inside embedded into the suit. So if we were to have it hanging, there's obviously that risk of hang up. Within the passengers, they don't have that, so they have the option that it's hidden away, there's nothing wrong with that. With us, it just wouldn't have worked in the proper manner that we were looking for.

MS. FAGAN:

Q. Okay, because the passenger one doesn't hang, it's built in.

MR. BARNES:

A. Right.

MS. FAGAN:

Q. But the pilot suits wouldn't accommodate that -

MR. BARNES:

A. No, and the vest we used wouldn't accommodate it as well, and I've used both and both are great pieces of kit, it's just that this one will do far superior for our needs.

MS. FAGAN:

Q. Will this be on the vest, physically attached to what the pilots are wearing or will it be a canister that they can, within arm's reach.

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MR. BARNES:

A. No, it must be attached to the body because if it's not, then it becomes dangerous goods in the aircraft. 3000 psi in a bottle, it must be attached to the person. So within out sweat like vest, it's a spec off the vest, if you will, that's already built in, that was incorporated, made for these bottles to be applicated later. So when we purchased these vests a number of months back, that's what we had in mind and we kept going with the program and now we're at the end of our training cycle and implementation stage. So it is contained within the holder, with a little guide on it that if in the event there is a bit of a hang up, it's just a witness thread that can be broken and discarded and egress can be maintained.

MS. FAGAN:

Q. Thank you. That will be the questions that I have with respect to the flight operations and in particular the pilots. And our next section is passenger movement. I don't know if we're ready, unless you have something to add, we'd move to the passenger movement

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video. I'd ask the technician/registrar to bring up the next video.

(VIDEO PLAYED)

Passenger Movement: Passengers begin to arrive at the heliport for the next flight offshore. They are greeted by efficient courteous staff and a tight security system. What they don't see are the many hours invested in advance planning to prepare the flight manifest. They work well ahead of the flight date to ensure that all passengers have the appropriate documentation in place, such as medical certificates and basic survival training. They work well ahead of the flight date to ensure that all passengers have the appropriate documentation in place, such as medical certificates and basic survival training. They work with dispatch to determine the payload for each flight and then pass this on to check-in staff one hour prior to departure.

The passenger movement department is the logistics division of Cougar Helicopters. They are responsible for communicating the logistical requirements with the offshore

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operator, their onshore representatives in order to provide safe, secure, efficient transportation of personnel to the offshore installations, and this can either by via air or via vessel, as required. From the passenger movement co-ordination side, a flight manifest involves many different aspects and interaction with other departments. It will begin with a list of passengers, freight, cargo, other requirements that will be sent to the traffic office from the offshore operator, either their offshore representative logistics or their onshore. From this, the traffic office will determine a booking list and they will create a flight. Now that will now be in the system. The dispatcher will provide a payload for each flight and this is based on the weather conditions and other variables of that day. However, what they will give us is the payload that is left over after the fuel requirements. The traffic agents will enter this payload into the POB system. This will be communicated to the checking agent downstairs and as each passenger comes through, their

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weight and other items will be subtracted from this payload.

The payload limit is a cold equation, meaning it cannot be exceeded by a single kilogram. If payload is exceeded, logistics will work with the client to prioritize. Most often cargo will get bumped, but occasionally passengers must be rescheduled. Cougar utilizes a computerized POB System named after the Personnel On board System used by the offshore operators to identify whom and how many of our passengers are on the offshore installations at any given time.

The POB System is an acronym which stands for the Personnel On Board. It has three main functions. It's primary function is to make the user aware of exactly how many personnel are on board any installation at any given time, who they are, what their details are, including the room that they're assigned and the muster station. One of the other things it does is it has a human resources component, which means the person's personal information is stored in there. We have a database which tells the user what certificates a person has,

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what they require, it lists all their personal information, their emergency contacts, their address, and this can be checked as they come in. The next function that it serves is as an actual flight operations tool, in that within this program we can create the booking list for the passengers who are travelling, we can verify as each passenger comes up to check in that they are indeed who they are supposed to be.

The passenger discloses any medications which are bagged separately and retrieved on arrival offshore from the medic. The check in process is intended to make the flight as safe, efficient, and comfortable as possible. Cougar has implemented some of the strongest security checks in the transportation industry and the entire passenger movement process is monitored by an extensive array of video security cameras. Passengers follow barricades to the security counter where they present boarding pass and photo ID to the security agent. The passenger removes objects from pockets and places them in the basket provided. Luggage is given a thorough hand

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search by the agent and is then x-rayed. Cell phones, cameras, and other unapproved devices are surrendered and secured until the passenger returns from offshore. The passenger then goes through a metal detector and may also be searched with a hand wand. Baggage is placed in a secure baggage and the passenger is released to the immersion suit room. There, after verifying photo ID and boarding pass, the immersion suit agent checks the manifest for the passenger's suit size or does a suit fitting. A personal locator beacon and an underwater breathing apparatus are then attached to the suit and checked for functionality. The suit is entered into a tracking system. The suit is presented to the passenger. Passengers wait in the lounge until they are paged into the briefing room. All shoes are removed and placed in colour coded boot bags, and the check in agent then plays the briefing video which reviews safety features on the helicopter and includes instructions for first arrival on the installation. Passengers don ear protection, line in single file, and are escorted by

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Cougar personnel to the helicopter for boarding. Escorts (inaudible) seat belts and give load documentation to the pilots. The flight maintenance engineer secures the door. On signal, the escort pulls the chucks from the wheels and the aircraft can then taxi to the runway. Aircraft monitoring in Blue Sky begins and the flight registers as departed in the POB System as the aircraft begins departure for the offshore. Dispatch receives a call when the flight has landed, at which point Heli Admin offshore registers all passengers in the POB System as occupants on board the installation. At all times during the flight communication is frequent and ongoing between the flight crew and the co-authority dispatch onshore. Occasionally, the flight will be turned back due, for example, to deteriorating weather conditions offshore, or the illumination of a cockpit indication light that may indicate a technical problem.

Turnarounds are generally caused by weather. It can either be the weather en route or the weather at the location, or in rare instances, the weather in St. John's or

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alternates. Weather offshore is also a factor. If en route or during the flight, even in the final stages, the weather goes below our approach and landing minimums, we will have no choice but to turn around and return to St. John's or to our alternate. We won't launch a flight unless we had a reasonable expectation of success in our ability to land out there, that the conditions will be as required. However, they change quickly en route, they change as we're approaching on some occasions. In most cases the fog will come in, the visibility will go below limits, and we'll have to turn around and return to base. This fog can persist for days, it can persist for a week.

When flights are grounded for consecutive days, as occasionally happens during the foggy season, passengers move offshore by sea on support vessels that depart from St. John's Harbour. In such cases, the passenger management system is still in place, except it tracks their movement by vessel, not helicopter.

The decision on whether or not a

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passenger will remain at the heliport, be placed on pagers, or sent home at the end of the day, is primarily an offshore operator decision. It is the operator's choice whether they would like to try again for another flight, or with the variables, and in discussion with Cougar dispatch, Cougar operations and passenger limits, if it would be best to move that into the next day, or whether or not they should actually go over for a meal or remain at the heliport. That's all done in consultation with each other, but it is the operator's decision.

(VIDEO ENDED)

MS. FAGAN:

Q. Now I believe Mr. Williams is going to handle this section, is that right? Okay, passenger movement, now we've just had the check-in process described and the pictures were very helpful. We've also had a description of the POB System, the electronic tracking system. The information with respect to the passengers that are on a particular helicopter, as I understand it, are all stored in the manifest?

MR. WILLIAMS:

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A. Stored in the POB System details, yes.
MS. FAGAN:
Q. Right. So you could -- how long would it take to have a list and the contact information with respect to the passengers on a particular flight? If you wanted a manifest for a particular flight, how quickly could you obtain that information using this system?
MR. WILLIAMS:
A. Very quickly. It's about three or four point clicks in the system and you're into a printable page of who's on the flight and their details.
MS. FAGAN:
Q. So if there was an emergency, how long would it take to create a manifest and retrieve that information with the contact information, and then what would you do with that manifest?
MR. WILLIAMS:
A. Understand the manifest is created prior to flight departure. It's a manifest that we would give the flight crew saying who's on board his flight, just the names, and the weight of what he's carrying and any cargo and destinations. I think what you may be

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referring to is, say, if we want the personal details, the next of kin, telephone numbers, who this individual works for, what's his occupation offshore, that's the stuff we would retrieve if it was any type of an emergency either on an installation or on a flight. That can be retrieved fairly quickly. If there was an emergency offshore at any location and we were asked by the respective oil companies in support of their emergency control centre to supply that information, very quickly, within minutes they could have that information.
MS. FAGAN:
Q. Now what about the supply vessels? The supply vessels have a crew, you know, it's a vessel, so they have a captain and all the crew. Is the crew of the supply vessels kept in this system or is it just the workers of the oil rig?
MR. WILLIAMS:
A. Just the workers of the oil rigs. We do not track the POB for the actual employees of the supply vessels, no, we don't.
MS. FAGAN:
Q. So if there was an emergency on the supply

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vessels, you would -- say if a supply vessel had a manifest -- you know, flight was cancelled, sixteen passengers were now put on a supply vessel, you would be able to obtain the information for the sixteen passengers?
MR. WILLIAMS:
A. For the passengers we are transferring from St. John's to the offshore installation, yes.
MS. FAGAN:
Q. That you track. So whether they're on the supply vessel or whether they're on a helicopter, you track them?
MR. WILLIAMS:
A. Yeah, at any given time we can tell you where any individual is for an oil company, and we refer to it, he's either on the beach, or he's on an aircraft, on a vessel, or on an installation. So at any given time if you work for any of the offshore operators, we can tell you where that individual is.
MS. FAGAN:
Q. Okay. Now we had heard that it may take longer to deal with notifying family members or immediate contact information if there was an emergency. So can you tell us what you do?

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You're saying that you can retrieve this information and have this data available. What do you do with it if there's an emergency with the workers of an oil operator?
MR. WILLIAMS:
A. That information is strictly supplied to the oil operator's respective departments, and how they contact their individual's -- they're their employees, we're not privy to pass supplying them with the information.
MS. FAGAN:
Q. So you pass the information on?
MR. WILLIAMS:
A. Correct.
MS. FAGAN:
Q. They may take longer for them to actually contact the people they're looking to contact?
MR. WILLIAMS:
A. That's -- I couldn't answer to how long. I might add that most of the oil companies, if not all of them, in their own emergency control centres have access to the system, it can actually get this data themselves.
MS. FAGAN:
Q. Okay, so they don't need to wait for you to

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pass them the information?
MR. WILLIAMS:
A. But if they do, we're more than ready to provide it quickly.
MS. FAGAN:
Q. In the system, it indicated that it keeps track of the certificates for the workers, such as their BST, their medicals. What about exemptions? We had heard in Mr. Decker's testimony that he had an exemption or an extension with respect to his sea day because the weather apparently was very cold when he was scheduled to do his sea day, so that had been postponed, and we had heard that that was an exemption.
MR. WILLIAMS:
A. Correct.
MS. FAGAN:
Q. So does this system track exemptions?
MR. WILLIAMS:
A. Yes, it does.
MS. FAGAN:
Q. Okay. We had a demonstration there of security measures. Can you describe the security measures? They've shown us how the

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baggage is tested and it's all inspected and x-rayed and the people are going through a metal detector. Do you test or do you have any regime for testing your security measures?
MR. WILLIAMS:
A. Yes, we do. If I can explain the security a little more, of course, we operate as an air carrier, we must abide by the Transport Canada security items of flight. That being said, that's things like dangerous goods, weapons, the same as if you got on Air Canada, the same thing is there as well, but from a security perspective, we also -- the operators will tell us what do they not want on their installation. For example, matches, cell phones, pagers, cameras, lighters. All these things are okay for carriage under Transport Canada, but the operators are saying they do not want these items to show up on their facility. So our security is safety of flight, the Transport Canada related items, and then it's items that the operators do not want on their facility. When it comes to testing, yes, we do get -- each of the operators have their own security advisors

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that basically establish the protocols for our security, help us in training of what their expectations are, and they do periodic testing as well on us.
MS. FAGAN:
Q. Now you have some slides which give us the weekly flying program and I'm wondering if you could turn to slide 49, and just give us an overview as to how many passengers you move per week, and just describe what's in this slide, because people who are viewing this through their computers don't see the PowerPoint.
MR. WILLIAMS:
A. Okay, what you see on the slide here is a Monday through Saturday scheduled flying program, and emphasis, I guess, on the word "scheduled". We commence our operations at 0700 in the morning and a typical day will see us doing five or six flights that are scheduled, Monday to Friday. There is currently one scheduled flight on Saturday. So our typical week will, you know, like I said, five to six flights per day, but keeping in mind that each individual operator will

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require what we refer to as some ad hoc requirements. A flight is not scheduled, but they need additional flights. So an average of six or seven flights per day we're rolling out of St. John's here.
MS. FAGAN:
Q. Okay, and it appears from this schedule that you start at seven in the morning and the last flight would be around noon?
MR. WILLIAMS:
A. That is correct.
MS. FAGAN:
Q. And so these are the flights that leave St. John's?
MR. WILLIAMS:
A. Correct.
MS. FAGAN:
Q. So they have to go out and --
MR. WILLIAMS:
A. And come back.
MS. FAGAN:
Q. And there's -- we've heard that there's about a 20 minute, 15/20 minute turn around time and then they come back?
MR. WILLIAMS:

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A. Yeah, pretty well each aircraft will do two flights a day. So when one aircraft comes back, it has a turn around time and will be scheduled in another slot time.

MS. FAGAN:

Q. Okay, and this schedule, is this schedule for the four S-92s or for the three S-92s?

MR. WILLIAMS:

A. That schedule you see there now is for the four S-92s.

MS. FAGAN:

Q. So they all have the same -- they have different numbers?

MR. WILLIAMS:

A. Yeah, if I can give you an example. I'll take Cougar 131 on Monday, commencing at 0700. The 1 represents Monday, of course. We say Monday is the first day of the week. Each installation has an identifier number; 3 is Hibernia, and 1 is the first flight of the day for Hibernia. So 131 is Hibernia flight at 7 o'clock on Monday. A 331 would be Hibernia flight at 7 o'clock on Wednesday, and each individual installation has its own -- like I say, its own identifier. Cougar 101 goes to

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the Stena Carron on Monday.

MS. FAGAN:

Q. Okay, and so on?

MR. WILLIAMS:

A. And so on.

MS. FAGAN:

Q. 151 and 121 and 141.

MR. WILLIAMS:

A. Keeping in mind, like you say -- you had mentioned about the schedule here. We always say that's if the stars align because the weather has to be good, there's no aircraft serviceability issues, no delays, if winds slowed us down coming back. So that is our wishlist schedule you see there.

MS. FAGAN:

Q. So zero wind would help?

MR. WILLIAMS:

A. Zero winds would help.

MS. FAGAN:

Q. The next slide is probably a nice lead in, and that is the pooling agreement. Now we've heard about the pooling agreement, so we don't need to take too much time, but from Cougar's perspective, can you give us a little bit of

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information on the agreement, the history, and how you apply it?

MR. WILLIAMS:

A. Yeah, I think I mentioned yesterday when I talked about the fleet in St. John's, each of our three main oil companies here in St. John's have one aircraft assigned on contract. What they've done is taken those three aircraft and put them into a collective pool and sort of passed them back to Cougar to manage on their behalf. What the pooling agreement gives us is some guidelines on how we manage their assets. For example, if Hibernia's aircraft today for some reason was out for scheduled maintenance or unscheduled maintenance, does that mean that Hibernia doesn't get a flight today; no, we have a pooling agreement that say this is how we share all the airframes together and how we roll the flight schedule. I won't -- like you say, you talked a lot about this one, but we do have one of the key components of the pooling arrangements is priority of flight, which is on the next slide, and can I go into that --

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MS. FAGAN:

Q. Yes, you can go to the next slide.

MR. WILLIAMS:

A. And where priority of flight comes in, for example, you saw the flight schedule that was up earlier, and if on Monday morning at 0700 the first flight is scheduled to go to Hibernia, if there's a medevac requirement on Terra Nova, Hibernia's flight doesn't go because the first priority of flight you see here is emergency flights. So in the pooling agreements that's a given that first priority flight is emergencies. I'll go on down to the second one, the second priority of flight, crew change flights. Hibernia could request additional flights today, ad hoc flights, but they do not go in front of another operator's crew change flights. Crew change takes the second priority. Then on into, I guess, the third priority would be technical priority ad hoc flights, and that means if it has a major operational impact offshore that they need a piece of freight or personnel quickly, we'll assess with each operator which one is more of a priority and arrange that. Of course, the

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fourth one is any other ad hoc flight that we can do whenever we can fit it in. So the key to the pooling agreements is the way we address priority flights and all the pooling participants, the three pooling participants, clearly define to our operations manager how to manage each of the individual aircraft on their behalf.

MS. FAGAN:

Q. Okay, thank you. Now this is the passenger information system and I believe this takes up two slides. So could you describe what is contained in these two slides?

MR. WILLIAMS:

A. On those two slides we want to lay out the amount of communication that goes between the Cougar traffic agents, the Cougar logistics teams, the OCC Centre, and the logistics folks offshore. I'll start off by saying every evening a daily schedule is put together for the next day's flying program, and that's a combination of the operator's requirements, what did we not get done today that takes a priority tomorrow, are all aircraft available, takes into priority consideration all those

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items and we arrive at a flying program that gets issued the evening before the flights. There's a morning operations call which is very important. It kicks off at 0730 in the mornings, and that is one that's basically chaired by our base operations manager from the OCC, and each of the operators will have a participant on that morning operations call where we give an update of today's activities. This is what we have from a weather observation, this is what we have from aircraft serviceability, these are some of the challenges we see today, we have strong winds or snow, and these type of things. So that takes place at 0730 in the morning. The FIDS we refer to, our Flight Information Display System, basically that's controlled by the radio operator that you saw in the dispatch function of the OCC. That's the position that updates real time flight information. It will show when an aircraft is departed St. John's, it will show en route to an installation, it will show it landed on an installation, and, of course, show its subsequent return back. It also shows -- if there is a delay, it will

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show our revised time of departure on that display system. So that's where probably the most real time information is available to the general public, or a passenger, or a passenger's relatives on the beach, you know, is that aircraft left St. John's, or is she coming back, and that's where that real information is there. I want to speak briefly about the flight information line when we talk about passenger information system. The primary role of our flight information line is to make sure that if you're scheduled for a flight at 8 o'clock going outbound, that you get to the heliport on time. This line is not updated for the purpose of you knowing when you need to be at the heliport, because we don't want you leaving Placentia, driving in to pick up your relative, and the flight is not even left St. John's yet. So the flight information lines primary purpose is to get people to the heliport for departure. If I can move on to the next slide.

MS. FAGAN:

Q. Yes.

MR. WILLIAMS:

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A. Another way we communicate the passenger information system is what we refer to as logistics e-mail. Each of the operators have assigned, I guess for want of better words, a single point of contact that we have that we will deal with issues on scheduling, any issues around operations within the oil companies. So there's a constant communication back and forth to logistics folks on any updates throughout the day, as weather changes, aircraft status changes and the like.

Passenger briefing and what we say from a verbal passenger briefing. We try and share as much information we can. Unfortunately in Newfoundland, you know, there's an old saying if you don't like the weather, wait 15 minutes, and sometimes you look rather stupid when you say that "well, we're not going for the next two hours because of freezing rain." All of a sudden it changes in 15 minutes and we're ready to go. So we're trying to give the best information we have available now to the passengers, and that changes quite frequently.

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Our operations manager or his delegate from the traffic centre will -- any flight interruptions, if you were scheduled to go and for some reason we said stand down, we try as much as possible to tell you why. Is it weather? Is it mechanical issue? Is there any issues offshore where we need to be delayed? So we try and pass that on as much as possible.

And I just want to say the Cougar website, if there's a passenger travelling offshore, specifically for the first time, if you go on our Cougar website, there's a lot of information that you should know prior to your travel offshore. So I would encourage anybody, if they're going for the first time, that's where you need to go to get a lot of that information.

MS. FAGAN:

Q. Okay, thank you. Now before we move to the suit fitting process, I just have a couple of -- on the communication, still on the communication topic. You spoke of the pooling agreement and the helicopters, the sharing of the helicopters, and as well the scheduling,

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and clearly we have delays or cancellations, especially in light of the weather. Could you give us a percentage of what -- what's the percentage of scheduled flights that leave or at least leave on the day they're scheduled?

MR. WILLIAMS:

A. Yeah. I guess one of the definitions and one of the targets we try to use, we do a stat called as scheduled, meaning that if a passenger was scheduled to get there today, did he get there today. Not necessarily was he delayed a couple of hours, but did he get there on the day he was scheduled to go. Over a 12-month period, that average will be probably around 75 to 80 percent, and you will find in July, June and August, you know, around that time frame, it's a lot lower because we spend a lot more days in the foggy season. So you know, the issues that would impact, of course, whether you get there on the day you were supposed to: weather being one of the big ones, if all of our aircraft are available to us today, and that varies from month to month. But overall, on a 12-month cycle, you'll probably get 70 -- you

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know, between 75 and 80 percent of the people will get there as scheduled, we refer to it.

MS. FAGAN:

Q. We also have had a discussion as to an additional helicopter, and it had been put to other presenters that would an additional helicopter assist in the interruptions. You know, if you have a backlog of two or three days, what is your view on how much or if an extra helicopter would assist in the backlog?

MR. WILLIAMS:

A. I think if you're in a backlog situation and you throw additional resources at it, it's pretty obvious that yes, you will get it done quicker. You know, you won't eliminate delays, but you will catch up on your backlog quicker with additional airframe. That's -- you know, the more you got, the more people you can move in the run of a day. That's for sure.

MS. FAGAN:

Q. Okay. But you can't start moving them until the weather clears.

MR. WILLIAMS:

A. Absolutely.

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MS. FAGAN:

Q. Okay. I also have become aware that in addition to this information that you provide the passengers and the information and the liaison with the oil operators themselves, that there is a helicopter steering committee. Could you describe this committee and who are the members, how often does it meet?

MR. WILLIAMS:

A. Well, the helicopter steering committee was established way back in the early days of Cougar, back in 1997, I think real early, but I'd like to add first is that I mentioned we -- supply services do three operators. Our base operations manager will have weekly meetings with -- logistics meetings, it's referred to, with each individual operator. That's dealing with specific issues that's pertaining to their installation, their processes, their procedures, and any issues we have with that particular company or they with us.

But what the helicopter steering committee does is basically manages the pooling principle. There are a lot of issues

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that we have are relative to all three operators together and the decision that we move forward must be made together as a collective pool. Those may be issues around enhancements to the aircraft. I can remember back a long time ago when we did some enhancements to radar equipment on the Super Pumas. That was a decision that all three operators made in conjunction with Cougar. It was a great move forward, but it needs to be a mutual decision amongst all personnel.

Typically the makeup of the helicopter steering committee is a representative from each of the individual operators from operations and finance, because a lot of the things we talk about involves that we want to adjust capacity, bring in another airframe, remove another airframe, has a commercial component as well, and from the Cougar environment, you'll get representations from pretty well all departments at those helicopter steering committee meetings.

MS. FAGAN:

Q. So when you say the operators, is it the three operators that are part of the pooling

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agreement?

MR. WILLIAMS:

A. Correct.

MS. FAGAN:

Q. It wouldn't, right now, involve ConocoPhillips or it wouldn't involve -- was it Statoil that you did work for?

MR. WILLIAMS:

A. Statoil or Conoco or Chevron that came in as individual operators for a short period of time.

MS. FAGAN:

Q. Because this affects the pooling arrangement of the three helicopters.

MR. WILLIAMS:

A. It's how we manage our assets together as a collective group, and I call it with four parties, the three individual operators and Cougar. It's how we manage our operation and our assets together.

MS. FAGAN:

Q. Okay, and how often does this committee meet? I mean, is this an annual thing or a monthly thing? And what's the focus?

MR. WILLIAMS:

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A. Well, that varies, how often we meet. Initially when it was established, I think it ended up being like a -- it was established as a quarterly meeting, and that will ratchet up, depending on the activity. I can remember during -- in Mr. Burt's previous slides, he talked about the aircraft transition from Pumas to 92s, which was something that involved all of us. We all needed to be involved in. I would say we were having those every three or four weeks.

We've been a while since we've had one in a formal process because we've been meeting so regularly in a return to service and all this, and all these issues have been bundled together. But the baseline that we will establish for the helicopter steering committee is a quarterly, but adjust depending on any activity that needs immediate attention or more frequent meetings.

MS. FAGAN:

Q. Okay, thank you. Now the next slide is 54 and it is suit fitting process. Now we've had a lot of information on suit fitting. I'm hoping not to repeat it too much, but Cougar

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Helicopters, you know, is involved and is where the suits are actually distributed, so it's important that we understand this process from your perspective.

So what I would like you to do is to take this in two segments. So the first segment is in November of 2007, the suits were introduced. So if you could go through, you know, what took place at that time and, you know, what was the process? Describe what Helly Hansen did at Cougar Helicopters from Cougar Helicopters' perspective when the suits were introduced, and then we'll deal with post March 12th after.

MR. WILLIAMS:

A. Okay. So in November, as you've -- I think you heard from the joint panel group is when they made the transition to the Helly Hansen E452, and our obligation or our contractual obligation is to provide storage and issuance of the suits that are selected by the oil companies. So Helly Hansen, being the provider, in November 2007, Helly Hansen was at our facility for a six-week period, and the reason why six weeks comes up so often,

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because that should get a rotation of every individual at least once through the heliport on a three-week rotation. So Helly Hansen provided suit fittings for passengers travelling offshore. They did pre-flight briefing videos or pre-flight briefings, I should say, on the E452 suit, answering any questions that passengers had and basically helping everyone into this new suit, some of them for the first time.

Cougar's immersion suit issuance training was received in November 2007 from Helly Hansen. Again, our responsibilities and training was consisting of on-the-job training for suit handling. The suit had different components of it. Maybe the light was in a different place, how we stored the suits, how we hang the suits and all of that kind of stuff. Helly Hansen provided a database system which basically tracks the inventory of suits, how many suits are at the heliport, how many suits are on any particular rig. They're not necessarily attached to an individual, but it's sort of a suit inventory system. Of course, the suit is attached with a PLB.

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There was preflight checks. And basically a general overview of the suit and how it properly should fit and at that time, I think there was seven different size ranges. So trying to teach us, instruct us on how out of those size ranges we issue the right suit to the right individual.

So Helly Hansen, for six weeks, and start up on November 1st and that was through to December 12th, I think.

MS. FAGAN:

Q. When the -- this was a fitting process for six weeks. When the suit was fitted to an individual, was a size assigned to that individual? Like John Smith is a medium -

MR. WILLIAMS:

A. Yes.

MS. FAGAN:

Q. - and then that stored and tracked and maintained, so that every time John Smith would come up, it would say John Smith, medium. Was that type of data collected and maintained?

MR. WILLIAMS:

A. Yes.

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MS. FAGAN:

Q. When it was introduced?

MR. WILLIAMS:

A. Yeah, that information is in the POB system. Once you travelled once at Cougar, when John Smith checked in, John Smith received a suit for the first time. His personal details was updated in the POB system to reflect the size suit that he had. So when he returned six weeks later for another suit, we knew the day before what size suit this gentleman would be requiring.

MS. FAGAN:

Q. Okay. The type of training you received from Helly Hansen, can you describe -- you received training on how to manage -- you know, take care of the suits, store them, hang them, record them. What training did you receive, if any, on how to fit them on the passengers?

MR. WILLIAMS:

A. The definition of fit is what I think has probably changed from November 1 to post return to flight. As I said earlier, there was, I think -- I'm not sure about the number of sizes, but if there's seven suit sizes, the

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individual was fitted to an appropriate size. That did not consist of any type of securing seals to ensuring that the face seals or the wrist seals was sealing properly. That wasn't a part of the initial -

MS. FAGAN:

Q. So would it be fair to say the sizing -- we've seen the charts. They were put in as exhibits from Helly Hansen, and on those charts, they had sizing and then there was a table, certain weight, certain height. You know, you fit in this range. It's like buying a lot of other clothes, you fit in this range, and that size is supposed to fit you.

MR. WILLIAMS:

A. Correct.

MS. FAGAN:

Q. Okay. So you had that type of information. What I'm hearing -- what I think I'm hearing is that there wasn't a process where you tested the seals?

MR. WILLIAMS:

A. No, not on November 2007.

MS. FAGAN:

Q. Okay, and I take it that the process is

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different now, and I'll have you go through that process in a minute. I just want to make sure I've finished pre-March 12th. Oh, there was one other issue. Were you aware of any complaints by passengers with respect to the suits prior to March 12th? Between November 7th and March 12th.

MR. WILLIAMS:

A. Yes. More in the form of verbal communication. The passengers would express, you know, some concerns around their thought process on the suit, some good, some bad. A lot of people had great compliments and some had not so good compliments, but as part of the communication process that I mentioned earlier between our base operations manager and the logistics group, all that information was passed on in our various logistics meetings around any issues that came forward, if a passenger brought it forward to us.

MS. FAGAN:

Q. So most of these were verbal?

MR. WILLIAMS:

A. Correct.

MS. FAGAN:

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Q. If not, all. Do you recall the type of complaint?

MR. WILLIAMS:

A. Mostly around comfortability and issues with struggling getting the zipper up and that -- you know, each of those individual things was taken into consideration where we actually ensure that people could get their zipper up. Part of the training that -- you know, after some of those complaints came in was we actually sat people in a seat and they proved that they could get the zipper up before they actually left the heliport.

MS. FAGAN:

Q. Okay. Now we know that the training is different now, so can you describe the process, and I think you have a slide that deals with the process for fitting now.

MR. WILLIAMS:

A. Yeah.

MS. FAGAN:

Q. May 2009 is when the return to flight.

MR. WILLIAMS:

A. Yeah.

MS. FAGAN:

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Q. So describe how that's different.

MR. WILLIAMS:

A. Of course, when we resumed flying in May 2009, again Helly Hansen came back to the heliport as part of their return to service program for fitting suits, and that, at the request of the operators, by the way, Helly Hansen was at the heliport. How long Helly Hansen was going to stay there sizing each individual before they go onto the aircraft was unknown at that time. I'm not sure of the exact, how long they were there. But in May '09, of course, the suit fit evaluation process was enhanced, you know, to include the face seal and any other type of issues around the suit. I won't get into -- I'm not sure of the actual details about how many people didn't fit. I think you've already gotten that information from some of your -

MS. FAGAN:

Q. Yes. We don't need that. I mean, all I'm looking for is what changed at Cougar Helicopters. What were you told and how did you change your procedures?

MR. WILLIAMS:

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A. What changed after May was that during a period of time and I guess a phase-out of the Helly Hansen people being at the heliport all the time, in conjunction with the operators, they requested that if we would take over the sizing and the fitting of the passengers as Helly Hansen was prescribed to do prior to. So what happened was that we agreed to do that and our personnel at Cougar was trained by Helly Hansen to basically become suit technicians, which had the same qualifications and training as the Helly Hansen folks that was there in the initial start up of our flights when we resumed in May.

MS. FAGAN:

Q. How long was the training, approximately? Was it a day or a week?

MR. WILLIAMS:

A. I think that was close to a week of training that these people received.

MS. FAGAN:

Q. And how many people at Cougar? Do you know approximately how many people at Cougar are trained?

MR. WILLIAMS:

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A. Well, we have a back-to-back. We have two what I call suit guys, for want of better words, and both of those individuals are trained for the suit technician position.

MS. FAGAN:

Q. Okay. I have one or two questions on suits, and I know we're getting -- we're at the end, but I'd like to finish the suit discussion before we break. The last issue is that I understand from Helly Hansen that the workers were surveyed with respect to the suits. Helly Hansen said that they surveyed the workers and the information on the survey has already been presented.

MR. WILLIAMS:

A. Okay.

MS. FAGAN:

Q. What was Cougar's involvement in the survey?

MR. WILLIAMS:

A. Cougar's involvement was basically to help facilitate the survey, because who sees every passenger and who can actually literally hand out a survey is the Cougar personnel on a day-to-day basis. So Cougar was involved in trying to facilitate that survey by making

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sure passengers got them, retrieving them back and passing that information back to Helly Hansen.

MS. FAGAN:

Q. Okay, and we understand Cougar is going to distribute a survey for the Inquiry later on when our expert, Kimberly Turner, returns.

MR. WILLIAMS:

A. Yes.

MS. FAGAN:

Q. And we're hoping we'll -- we understand you're going to distribute it for us as well.

MR. WILLIAMS:

A. Okay.

MS. FAGAN:

Q. That would be -

MR. WILLIAMS:

A. I think there was a charge for that though, by the way.

MS. FAGAN:

Q. Well, we'll have to discuss that during the break. We are at the end of the day. There's a couple of more points and then we were going to have the pre-flight briefing video played. So we could end now and tomorrow we'll pretty

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well start with that.

COMMISSIONER:

Q. Okay then, fine. We're adjourned until tomorrow morning at 9:30 then.

UPON CONCLUSION AT 4:30 P.M.

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CERTIFICATE

We, the undersigned, do hereby certify that the foregoing is a true and correct transcript of a hearing heard on the 2nd day of February, 2010 at Tara Place, 31 Peet Street, Suite 213, St. John's Newfoundland and Labrador and was transcribed by us to the best of our ability by means of a sound apparatus.

Dated at St. John's, NL this
2nd day of February, 2010
Cindy Sooley
Discoveries Unlimited Inc.
Judy Moss
Discoveries Unlimited Inc.

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