

OFFSHORE HELICOPTER SAFETY INQUIRY

November 2, 2009

Tara Place, Suite 213, 31 Peet Street

St. John's, NL

November 2, 2009

PRESENT:

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

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Cecily Strickland..... Development Company (HMDC)**

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

Stephanie Hickman. Husky Oil Operations Ltd.

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Jamie Martin..... Families of Deceased Passengers

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..... agent on behalf of Douglas A. Latto for Lanouette Estate (Co-pilot)**

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

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<p>1 November 2, 2009</p> <p>2 COMMISSIONER:</p> <p>3 Q. Good morning, ladies and gentlemen. I would</p> <p>4 like to introduce you to our consultant, Ms.</p> <p>5 Kimberley Turner, who is the CEO of Aerosafe</p> <p>6 Risk Management, and I'm going to pass things</p> <p>7 over now to Mr. Roil, who will give her a</p> <p>8 larger introduction and assist her in her</p> <p>9 presentation.</p> <p>10 ROIL, Q.C.:</p> <p>11 Q. Thank you, Commissioner. Before I do that, I</p> <p>12 would want to just take a moment to have</p> <p>13 another safety moment. We did this at the</p> <p>14 beginning of the Inquiry. As we all know,</p> <p>15 living in Newfoundland, H1N1 is amongst us.</p> <p>16 For those that are in the room, I would advise</p> <p>17 that we clean the tables every day before they</p> <p>18 come in, but we don't get a chance to do it a</p> <p>19 second time. There are hand sanitizers on all</p> <p>20 of the tables, and I would simply encourage</p> <p>21 people to exercise good practices with respect</p> <p>22 to their health and to absent themselves from</p> <p>23 the room if they feel they have any symptoms</p> <p>24 coming on. The second thing is the issue of</p> <p>25 evacuation. Again I said earlier on that</p>	<p>1 Q. As is customary for witnesses, although I</p> <p>2 don't know that you're giving many facts, but</p> <p>3 we have always asked witnesses to take an</p> <p>4 oath. Is that okay?</p> <p>5 MS. TURNER:</p> <p>6 A. It is.</p> <p>7 ROIL, Q.C.:</p> <p>8 Q. Okay, the Registrar will read the oath to you.</p> <p>9 MS. KIMBERLEY ANN TURNER (SWORN) EXAMINATION BY JOHN</p> <p>10 ROIL, Q.C.:</p> <p>11 ROIL, Q.C.:</p> <p>12 Q. Commissioner, there are two exhibits which I</p> <p>13 would ask you to accept at this time, and</p> <p>14 place into our records. One is the</p> <p>15 presentation by Ms. Turner. It is a</p> <p>16 PowerPoint presentation. It can be uploaded</p> <p>17 onto our system and made available to the</p> <p>18 public. In the early part of that</p> <p>19 presentation, there is a video called "A Risk</p> <p>20 Maker/Risk Taker". It's about 20 minutes.</p> <p>21 It's an informative piece that was done by a</p> <p>22 different company entirely. It is subject to</p> <p>23 copyright rules and regulations, and for that</p> <p>24 reason regrettably, we cannot -- under our</p> <p>25 rules, we cannot upload it to the webpage for</p>
<p>Page 2</p> <p>1 there are three exits to this building. We</p> <p>2 are on the second floor, so there's only one</p> <p>3 set of stairs to -- one flight of stairs to</p> <p>4 use. There are three sets of stairs; one at</p> <p>5 either end of the building and one in the</p> <p>6 center. Those at either end of the building</p> <p>7 are a little more steep than normal, so I'd</p> <p>8 ask people to exercise caution if they are</p> <p>9 using those stairs. This morning's witness,</p> <p>10 Commissioner, is Kimberley Turner from</p> <p>11 Aerosafe Risk Management. She is a consultant</p> <p>12 who we have been working with for a number of</p> <p>13 months now to assist us in developing</p> <p>14 something called a risk profile with respect</p> <p>15 to the industry. Her presentation this</p> <p>16 morning and this afternoon, as long as it</p> <p>17 takes, will be to help us understand the</p> <p>18 approach and why we are looking at some of the</p> <p>19 things we're looking at, and how all of them</p> <p>20 can assist in developing safety in the</p> <p>21 offshore transit of workers in Newfoundland</p> <p>22 and Labrador. Good morning, Ms. Turner.</p> <p>23 MS. TURNER:</p> <p>24 A. Good morning, Mr. Roil.</p> <p>25 ROIL, Q.C.:</p>	<p>Page 4</p> <p>1 wide distribution to the public, however, the</p> <p>2 audio portion of it will be played over the</p> <p>3 webcast and I understand by Rogers Television,</p> <p>4 so I would ask that the two documents be</p> <p>5 admitted, but that restrictions be placed on</p> <p>6 the video "Risk Manger/Risk Taker".</p> <p>7 COMMISSIONER:</p> <p>8 Q. Okay, thank you very much. You have the</p> <p>9 materials?</p> <p>10 MS. TURNER:</p> <p>11 A. Yes.</p> <p>12 COMMISSIONER:</p> <p>13 Q. So these are admitted as evidence, with the</p> <p>14 restriction which Mr. Roil mentioned.</p> <p>15 ROIL, Q.C.:</p> <p>16 Q. Good morning, Ms. Turner.</p> <p>17 MS. TURNER:</p> <p>18 A. Good morning, Mr. Roil.</p> <p>19 ROIL, Q.C.:</p> <p>20 Q. Welcome to Newfoundland.</p> <p>21 MS. TURNER:</p> <p>22 A. Well, thank you very much, it's great to be</p> <p>23 here.</p> <p>24 ROIL, Q.C.:</p> <p>25 Q. This is not your first visit?</p>

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<p>1 MS. TURNER: 2 A. No, it's not. 3 ROIL, Q.C.: 4 Q. Okay. Tell me a little bit about yourself and 5 the company, Risk Management -- sorry, 6 Aerosafe Risk Management, and a little bit 7 about your background, please? 8 MS. TURNER: 9 A. Well, thank you, John. Good morning, 10 Commissioner. It's good to be here to work 11 with yourself and the team this week. Just to 12 give you a little bit of my background, I've 13 been working in the field of aviation risk 14 management for just on 14 years. I am the 15 Chief Executive Officer of Aerosafe Risk 16 Management. I thought it would be important 17 to just start off with a little bit of my 18 professional background. I have an Aviation 19 Operations Management background, originally 20 with the military, and very early on in my 21 career I got involved in the risk management 22 game, and working at an operational level and 23 at an organizational level. I established the 24 company and founded the organization in 1997, 25 and in the last 13 years we've grown to be a</p>	<p>1 teaching appointment at post-graduate 2 faculties at a number of universities. I have 3 authored three publications in this field in 4 that time, and also I've recently been 5 appointed as the Director or one of the board 6 members of the International Graduate School 7 of Risk Management. Finally, with Prince 8 Charles here, I'm proud to say that some eight 9 years ago I was a recipient of the Prince of 10 Wales Award for the work that we've done in 11 this field and certainly that's a nice 12 connection this morning. 13 ROIL, Q.C.: 14 Q. Okay, well, I can tell by your accent, as we 15 say, you're not from here, so I'd remind you 16 that we don't have an accent, you do. 17 MS. TURNER: 18 A. Well, that's debatable, Mr. Roil. 19 ROIL, Q.C.: 20 Q. And we will certainly -- I don't think we'll 21 have any difficulty with your accent, but I 22 might from time to time ask you to speak a 23 little more slowly. 24 MS. TURNER: 25 A. Sure.</p>
<p>Page 6</p> <p>1 leading provider of risk management services 2 globally. Our head office is in Sydney, 3 Australia, and we also have offices in 4 Wellington, New Zealand; Washington, DC; and 5 partner offices in India and China. So 6 globally our team is about 50 strong, and I've 7 been leading that organization since the 8 inception. From a professional perspective, 9 I'm a certified practice risk manager and hold 10 that licence. It's very similar to a CPA for 11 accountants, but for risk professionals, and 12 I've been very fortunate over the time of my 13 career to be involved in a range of different 14 standards setting, both in the aviation 15 industry but further afield in the risk 16 management discipline. I sit on various 17 standards committees, one being the Australian 18 New Zealand Standards Committee for Corporate 19 Governance, and it's through that role we've 20 actually advised a number of stock exchange 21 boards around the world, in Australia and 22 India. So the risk management discipline is 23 quite broad, although my specialty, love, and 24 interest is in the aviation field. Finally, I 25 also hold a number of various appointments,</p>	<p>Page 8</p> <p>1 ROIL, Q.C.: 2 Q. Okay. You have, I think, control of the 3 PowerPoint Presentation. I just want to make 4 sure that all our technology is working this 5 morning. 6 MS. TURNER: 7 A. Yes, that's working well. 8 ROIL, Q.C.: 9 Q. Okay, good. So briefly what is risk 10 management all about and what are you here to 11 -- what are you going to do to assist us in 12 this process? 13 MS. TURNER: 14 A. Well, thank you. First of all, I'd just like 15 to acknowledge that the Inquiry has adopted a 16 risk based approach to the deliberations over 17 the coming months. That really is a very 18 innovative and dynamic approach and it's been 19 enjoyable working, Commissioner, with yourself 20 and the team in the preparation leading up to 21 this public element of the Inquiry. In terms 22 of risk management, it really is a management 23 discipline focusing on looking at the 24 vulnerabilities and potential deficiencies 25 that could impact on a particular objective.</p>

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<p>1 So over the course of the material that I'm 2 going to cover, I'd like to cover a number of 3 topics. Firstly, risk management, what it is, 4 its definition, but really get to the 5 practical side of things of how could this 6 process be applied in the offshore oil 7 industry, but also in the helicopter 8 transportation industry, and really talk about 9 the methodologies that are available to assist 10 the Inquiry with this work. There's three 11 other disciplines that actually are related to 12 the aviation risk management field. One is 13 the corporate governance of an organization. 14 Secondly, is the safety management systems, 15 and I understand you heard last week from both 16 Transport Canada and the Transport Safety 17 Board, and they emphasized this discipline of 18 safety management system. The third related 19 area is contract management, and, in 20 particular, I'll be focusing on the risk 21 management and safety management component of 22 how contract -- that contract relationship is 23 put forward between an operator and a 24 supplier. 25 ROIL, Q.C.:</p>	<p>1 is, in essence, a risk assessment on the 2 industry itself. 3 ROIL, Q.C.: 4 Q. Uh-hm. 5 MS. TURNER: 6 A. And I'll talk to the challenge of how do you 7 even define what the industry is, and we'll 8 have some good conversations around that. 9 ROIL, Q.C.: 10 Q. Okay, do you want to take us at whatever speed 11 you wish at this point through the 12 presentation and the various slides that you 13 have for us. 14 MS. TURNER: 15 A. Thank you, John. As I mentioned, my 16 background, I consider myself a risk 17 management specialist where others may 18 actually see me as a generalist because of the 19 discipline of risk management and that broad 20 application I just talked to. Over the last 21 14 years we've worked with over 210 22 organizations in 16 countries around the 23 world. About 40 percent of those 24 organizations have actually been outside the 25 aviation industry, and include the mining</p>
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<p>1 Q. Uh-hm, and one of the PowerPoint slide lines 2 talks about an industry risk profile. Again 3 just generally what is that, so that we 4 understand what we're looking for when we go 5 and find it later in your presentation? 6 MS. TURNER: 7 A. Sure. The risk management field is actually 8 quite an interesting area because it can be 9 applied at all different levels. Risk 10 management can be applied at the operational 11 end with the helicopter flying managing the 12 hazards and the risks of that particular task 13 of flight. It can be used at an 14 organizational level in looking at how the 15 business risks, the organizational risks, the 16 financial risks, the safety risks, are 17 actually managed at that corporate level. 18 Then it actually can be used at a higher 19 level. The same process, but an industry risk 20 profile looks at what risks are apparent 21 within an industry sector, and really starting 22 to look at some systemic issues or potential 23 issues that have the opportunity to impact in 24 both a positive and a negative way on that 25 sector itself. So an industry risk profile</p>	<p>1 sector, the financial industry, the not for 2 profit sector, all the way through to primary 3 schools and high schools have adopted this 4 process around how they manage their various 5 risks. Obviously, in aviation, we all 6 acknowledge that the industry isn't free of 7 risk and risk is very much part, an inherent 8 of the operation itself. In order to remove 9 all risk, you'd have to actually stop flying 10 and we know that that wouldn't actually be 11 supportive of the objectives of how aviation 12 is utilized. So in looking at risk 13 management, it is really a broad discipline. 14 It does sit as an umbrella to various aspects, 15 but it also is a process that sits within 16 various systems itself. So over the course of 17 my presentation, I'll be referring to those 18 different levels of application and really 19 trying to work through some practical examples 20 of where that fits. Now just to frame up 21 where myself and our organization fit into the 22 picture, in developing an industry risk 23 profile, it very much is an interactive 24 process. It's not necessarily an independent 25 assessment that we'll be doing without any</p>

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1 consultation. We envisage that this process
 2 will align and connect with the various phases
 3 of the Inquiry, and really in this first
 4 phase, Phase 1A, it's all just about setting
 5 the context, understanding the structure, the
 6 set up, and the boundaries of the industry,
 7 understanding what processes are in place that
 8 already are there to manage risk, and then
 9 we'll be able to really continue through that
 10 process. I thought it may be useful right up
 11 front, just because the risk management
 12 discipline is quite a diverse field, I felt
 13 that actually playing this "Risk Maker/Risk
 14 Taker" DVD may actually help put in
 15 perspective the process that I'm going to
 16 refer to throughout the discussions that we'll
 17 have today and tomorrow. Now we were
 18 approached, or more importantly, I was
 19 approached by the producers, Nicholas & Smith,
 20 of this DVD. They were contracted by the
 21 standards organization in Australia to produce
 22 an educational video for broad release. It's
 23 not for the aviation industry, it's really for
 24 all industries, and I was asked to speak
 25 alongside the Chair of the International

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1 Standards Organization Committee on risk
 2 management, Kevin Knight, and I'll talk a
 3 little bit about that later on. So, Mr. Roil,
 4 if you're happy, maybe I could suggest that we
 5 have a look at that DVD.
 6 ROIL, Q.C.:
 7 Q. Yes. I think before we do, I just have to
 8 extend our apologies to those that are
 9 watching on the web and through television
 10 that they will not be able to see the images,
 11 but I hope that the text will be sufficient
 12 that they'll understand the context of what's
 13 being said.
 14 MS. TURNER:
 15 A. Thank you.
 16 VIDEO PLAYED
 17 To copy or to use an illegal copy of this
 18 video or DVD. Protect yourself and your
 19 organization by making sure that only videos
 20 and DVDs which have been legally purchased are
 21 used by your organization.
 22 Over 100,000 people gathered to watch the
 23 much publicized event.
 24 Take a few seconds to think about all the
 25 work that went into this project. Think about

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1 the leadership, the managers, the staff, the
 2 operators, the contractors. Think about all
 3 of the decisions that had to be made at every
 4 level, all leading to this moment.
 5 A young girl was killed instantly when
 6 she was struck by a piece of flying metal
 7 standing in a crowd beyond the lake over 400
 8 meters from the planned implosion. A number
 9 of other spectators were injured by flying
 10 metal and debris, ranging from chest injuries
 11 through to shock.
 12 Risk is an integral part of every
 13 business, every process, and every activity,
 14 whether it's investing in a new technology,
 15 taking on a different supplier, buying a piece
 16 of equipment, or hiring a new staff member.
 17 Dr. Patel was appointed as a senior
 18 medical officer in surgery at Bundaberg
 19 Hospital. He immediately assumed the position
 20 of Director of Surgery. Over two years Dr.
 21 Patel saw 1,450 patients. 88 of Dr. Patel's
 22 patients died. A clinical review has since
 23 found that Dr. Patel directly contributed to
 24 the deaths of 13 patients. Dr. Patel abruptly
 25 left the country and it was the hospital

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1 management which found itself having to answer
 2 questions at the Commission of Inquiry.
 3 Every time as a manager I make a decision
 4 I, in fact create a risk, have I made the
 5 right decision, and can I manage it to a
 6 successful outcome.
 7 Management cannot avoid risk, but risk is
 8 as much about maximizing opportunities as it
 9 is protecting against loss.
 10 The thing with risk management is
 11 remember it comes from the word "rischio",
 12 which is to dare you, and we don't dare to do
 13 things that we expect to fail. We dare
 14 because we think that we'll succeed.
 15 Generally, the focus on risk management
 16 is people look at the negative, and if we
 17 really examine what risk is about, risk is a
 18 chance of something happening that could
 19 impact upon your objectives. It's really
 20 important to have those objectives as our
 21 primary focus because then our focusing risk
 22 management is going to be more opportunity
 23 based.
 24 The new technology and ticketing system
 25 was introduced to streamline administration

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1 and reduce fare evasion. The changes proved
 2 so popular with customers that there's been a
 3 surge in bus and subway usage.
 4 The management of risk and risk is very
 5 much about how do we grasp opportunities
 6 whilst managing to minimize the loss, and
 7 we're not about eradicating risk, we're about
 8 managing risk to a tolerable level.
 9 An organization can manage risk by
 10 screening out events which can either cause
 11 harm, or which can reduce the chance of
 12 getting the best possible outcome. One screen
 13 is the leadership of the organization. Another
 14 screen is the organization's management
 15 systems. The most effective screen is an
 16 explicit risk management system. It is made
 17 up of seven essential steps. The integrity of
 18 each screen can mean success or failure. Any
 19 cracks or holes could allow an event to occur
 20 which affects the organization's performance
 21 and pursuit of its objectives. Sometimes a
 22 diabolical combination of factors can come
 23 together to trigger a major disaster.
 24 Four young sailors were killed and five
 25 others seriously injured after a fireball

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1 engulfed the engine room of the petroleum
 2 tanker, the Westralia, the biggest ship in the
 3 Australian Navy.
 4 Every organization has a unique set of
 5 objectives, challenges, opportunities, and, of
 6 course, risks.
 7 A spokesperson said that the high cost of
 8 public liability insurance is threatening the
 9 survival of country shows and local sport. In
 10 Michigan, several people were trampled as
 11 hoards of shoppers flooded through the doors
 12 in search of bargains at the traditional start
 13 of the holiday season sales.
 14 When things go badly wrong, one of the
 15 characteristics is that the sequence of events
 16 as described afterwards as being
 17 inconceivable, the causes appear so
 18 straightforward, it is hard to imagine how it
 19 was allowed to happen.
 20 A massive sea search failed to find the
 21 American couple. They were on a barrier reef
 22 scuba diving trip with 23 other tourists when
 23 they were accidentally left behind in the open
 24 sea. The fact that they were missing was not
 25 discovered until the following day.

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1 It's my deep regret, that we believe at
 2 this time there have been 14 loss of life as a
 3 result of the fire this afternoon.
 4 Most of the cases presented in this video
 5 are from organizations with established risk
 6 management policies and frameworks. So what
 7 went wrong. Was one surgeon solely to blame
 8 for the patient deaths, or were there other
 9 issues at play. Where were the cracks in the
 10 risk management.
 11 Leadership determines the direction and
 12 culture of the organization. Leaders need to
 13 promote common goals and empower individuals
 14 at all levels to act.
 15 The goal of leadership is setting up the
 16 appropriate infrastructure and framework that
 17 is appropriate for the business to allow
 18 people to manage risk, setting the tone from
 19 the top, really giving the definition of focus
 20 of what type of risk planning they'd like, and
 21 then secondly looking at the risk information
 22 to ensure that that's moving around the
 23 organizations where it needs to go, and being
 24 escalated to the right level.
 25 The BP investigation found that one of

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1 the causes was that the working environment
 2 had eroded to one characterized by a
 3 resistance to change and lacking in cost and
 4 motivation. The end result was that rules
 5 were not consistently followed.
 6 It's up to the various levels of
 7 management to, in fact, get out and convince
 8 the people that, yes, we are serious about the
 9 management of risk; yes, I expect you to tell
 10 me the bad news and the really ugly news, so
 11 that I can make better decisions, rather than
 12 wait for things to happen.
 13 The report stated that there was a
 14 tendency of administration to ignore or
 15 suppress criticism. There also existed a
 16 culture of concealment of some practices and
 17 conduct. This culture started at the top with
 18 successive governments.
 19 Organizations sometimes become so focused
 20 on a particular outcome that they allow it to
 21 overwhelm all other considerations.
 22 The Inquiry found that budgets placed too
 23 much emphasis on attaining target numbers and
 24 too little on patient care.
 25 Management systems standards and

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1 procedures, as well as industry and government
 2 requirements, all have an implicit role in
 3 risk management.
 4 I liken risk management to an umbrella.
 5 One of the risks I have to manage, if they
 6 happen to be quality or environment or occ
 7 health and safety, then there are standards
 8 available for me to go to and help me manage
 9 those risks, to put in systems to show that I
 10 am, in fact, managing those risks.
 11 The Board of Inquiry found that while
 12 there was no single cause, the fire started by
 13 diesel fuel from a burst flexible hose
 14 spraying onto a hot engine component and then
 15 igniting. A new hose was supplied by the
 16 ship's contractor to replace original pipes.
 17 To the questions, was the equipment fit for
 18 purpose, were the systems and procedures on
 19 board effective to maintain safe operation,
 20 and was there a management system to monitor
 21 performance, the Board of Inquiry found the
 22 answers must be "no".
 23 Communication and consultation with
 24 internal and external stakeholders is the
 25 first step of the risk management process. It

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1 is also essential to every step in the
 2 process.
 3 We deliberately use the two words
 4 "communication" and "consultation", because
 5 communication is about telling you what we're
 6 doing, how we're doing, why we're doing, but
 7 consultation is sitting down and actually
 8 talking to you and listening to you. It's a
 9 two-way dialogue, very hard to do in many
 10 cases.
 11 The Authority collected information from
 12 its customers to support its decision to
 13 implement the 700 million dollar fare
 14 collection system.
 15 But if we don't have the consultation,
 16 then we have real problems at how we go about
 17 managing risk.
 18 Many changes in a complex organization
 19 led to a lack of clear accountabilities and
 20 poor communication. Individuals felt
 21 disempowered from suggesting or initiating
 22 improvements.
 23 There's a couple of different aspects in
 24 the role of communication. Firstly, it's
 25 actually finding information from the right

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1 areas, and the second is once we've got that
 2 information or towards the end of your risk
 3 planning activity, to then inform the right
 4 people in order to get the right level of
 5 attention or action.
 6 No matter what an organization does, it
 7 interacts with a wider environment. What
 8 industry sector is it in, who are its
 9 stakeholders, what are its capabilities.
 10 Context is the second step, but it's
 11 really the foundation that we're building.
 12 The rest of the risk management process is
 13 built up on context, and context is one of the
 14 hardest ones to come to grip with. Too often
 15 people start to look at themselves as if
 16 they're literally in a universe of their own,
 17 but there's all that big wide world outside
 18 the fence that you have to take into account
 19 when you're putting context together.
 20 The evidence demonstrated that the
 21 personnel did not sufficiently understand the
 22 ship safety regime under which Westralia
 23 operated. The contracting staff did not
 24 understand that machinery modifications to
 25 this class of ship require a full approval

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1 process.
 2 Stakeholders do have an influence on
 3 setting the context because remember we go
 4 back, the very first thing we should be saying
 5 when we're setting the context is what are our
 6 objectives, and what is the environment in
 7 which we're wanting to set this business up
 8 in, and part of the environment is who are
 9 your stakeholders.
 10 The report found that some doctors and
 11 administrators expressed a view that in
 12 certain cases it's better to provide an
 13 inadequate patient care service than to
 14 provide no service. The report stated there
 15 could be no justification for this view.
 16 The first thing is being very clear about
 17 what is your objective because remember risk
 18 is a chance of something happening that will
 19 impact on your objective.
 20 The internal context includes setting
 21 scope and boundaries by defining the project
 22 and the objectives.
 23 The project was promoted to the public by
 24 people in government and the commercial radio
 25 station, who did not know the hazards. The

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1 Inquest into the death observed there was no
 2 need for any public official to create or turn
 3 the project into a media promotion.
 4 The context also includes establishing
 5 the risk criteria. For example, the kinds of
 6 consequences to be considered.
 7 Risk management context then comes down
 8 to what's our appetite for risk. So one of
 9 the things that the Board and the CEO has to
 10 clearly establish is what are the
 11 parameters of air risk tolerance, at what
 12 stage are we going into aversion, at what
 13 stage are we going into recklessness.
 14 The elective surgery target was necessary
 15 for the hospital to obtain maximum funding.
 16 Dr. Patel maintained a high through put of
 17 surgery. He made himself so valuable in that
 18 respect that there may have been a reluctance
 19 to investigate him.
 20 A risk that has not been identified
 21 cannot be managed.
 22 We've got to be saying what are the
 23 things that I do here, what are the decisions
 24 I make here, how do they affect other parts of
 25 the enterprise, how do they impact on how the

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1 organization actually achieves its objectives.
 2 The Inquest found that the process by
 3 which some persons were appointed was
 4 connected to the death. Poor work practices
 5 in the appointment process permitted two
 6 persons to be assigned to the demolition
 7 project who were entirely unqualified for the
 8 task.
 9 There was a failure to check Dr. Patel's
 10 credentials. Had that been done, his
 11 discreditable past would probably have been
 12 revealed.
 13 The whole game around risk management is
 14 to try and turn that uncertainty into a degree
 15 of certainty, so at least we've got a high
 16 level of confidence that what we're doing
 17 about the situation is going to position us in
 18 a better way.
 19 So what we've got to do is look at how
 20 can we tap into corporate memory and corporate
 21 knowledge, and one of the ways to do that is a
 22 "slice group", but use a diagonal slice so
 23 that we've got senior people, we've got
 24 supervisors, we've got workers, but they're
 25 across the organization.

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1 The evidence demonstrated that the
 2 personnel did not have the level of training
 3 in or theoretical knowledge of diesel engines
 4 to alert them to the possible dangers.
 5 We've then also got to be willing to say
 6 what's industry best practice, what's industry
 7 experience, because we might not necessarily
 8 be the worlds best practice. There may be
 9 things that we can learn from outside.
 10 A poor level of hazard awareness resulted
 11 in people accepting levels of risk that are
 12 considered higher than for comparable
 13 installations. One consequence was that
 14 temporary office trailers were inappropriately
 15 situated. This contributed to the deaths of
 16 workers.
 17 Bringing together the right information
 18 is vital. It requires a systematic approach,
 19 including the use of expert knowledge and
 20 organizational experience.
 21 The destruction of a tire caused damage
 22 to the aircraft leading to a crash less than 1
 23 minute and 30 seconds into the flight. All
 24 109 passengers and crew were killed. The
 25 plane also crashed into a small hotel killing

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1 four employees.
 2 When we start to formalize risk
 3 management, we then start to use more formal
 4 tools and techniques, such as looking at
 5 process mapping, looking at task analysis,
 6 taking the information out of this for
 7 analysis and looking at the weaknesses and
 8 threats and turning those into risks, so
 9 really putting a little bit more structure
 10 around the risk identification activity.
 11 The accident investigation listed 57
 12 recorded cases of tire bursts on Concorde over
 13 the years. On 12 occasions the puncture
 14 caused structural damage to the wings, and on
 15 six occasions the fuel tanks were penetrated.
 16 However, these events have never before caused
 17 tank rupture or a fuel fire.
 18 The aim of risk analysis is to estimate
 19 likelihood and consequences in the context of
 20 any existing control measures.
 21 The investigation stated that the
 22 accident showed that the destruction of a
 23 tire, a simple event which could not be
 24 asserted not to reoccur, had catastrophic
 25 consequences.

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1 And then we put together our risk matrix
 2 which we were able to show consequences and
 3 likelihood, and then that establishes the
 4 level of risk. The other critical part of
 5 analysis is looking at what controls we have
 6 in place, and quite often we assume that the
 7 controls are good.

8 There were no regular meetings that
 9 effectively monitored clinical performance,
 10 and no adequate recording of complaints. For
 11 example, there were more than 20 complaints
 12 against Dr. Patel, yet that fact was not
 13 apparent from the complaints record.

14 And, therefore, we need to be looking at
 15 those controls to say are they still relevant,
 16 are they still cost effective, are they, in
 17 fact, providing us with the protection we
 18 think they are, and then the next step is to
 19 say, how well does management enforce them,
 20 because you could have the best controls in
 21 the world, but if nobody enforces them, you've
 22 got no controls.

23 The Inquest stated that the risk
 24 assessment plan was a failure. The plan did
 25 not address the specific methodology to be

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1 used, or the experience of the contractor in
 2 undertaking similar implosions. Also it was a
 3 major failing in the entire project that no
 4 expert check of an independent nature was made
 5 at any stage.

6 When you start with the process, say, 40
 7 percent of your time is up in the context, and
 8 then really you spend the time trying to get
 9 the risks right, your analysis should flow
 10 fairly quickly, and your evaluation is then
 11 really just making a decision; is it
 12 acceptable, yes or no; do I have the right
 13 level of authority to make that decision, yes
 14 or no; if no, who do I escalate it to.

15 The output of risk evaluation is a
 16 prioritized list of risks for further action.

17 The BP investigation team found that
 18 safety and systematic risk reduction
 19 priorities had not been set by management.

20 If I've got two risks that have been
 21 measured on exactly the same scale, I would
 22 then look at what risk dimension they have an
 23 impact on. Is it a financial risk or a
 24 capability risk; is it a reputation risk or a
 25 safety risk, and then I would actually

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1 prioritize those different dimensions, which
 2 would then help me sort out or prioritize in
 3 order those risks.

4 (VIDEO PLAYED)

5 The purpose of risk treatment is to
 6 change the risk to a level where the benefit
 7 exceeds the cost of treatment. Having done
 8 your risk assessment where you've identified,
 9 analyzed and evaluated your risk, you may have
 10 to make a decision. Is the risk now at a
 11 tolerable level or does it in fact require
 12 additional treatment to get it to a tolerable
 13 level?

14 A cost benefit analysis is very useful in
 15 risk treatment, and ultimately, that's the
 16 decision that we need to make. When we're
 17 determining how low can we get the risk, it's
 18 all about well, what's the benefit at that
 19 stage.

20 When the price of jet fuel hit an all
 21 time record, many airlines struggled to
 22 maintain their profit levels. By hedging
 23 against increases in jet fuel prices, some
 24 airlines have saved hundreds of millions of
 25 dollars.

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1 What we need to do is identify the most
 2 effective treatment strategies. Now if we're
 3 to do that, that really needs to be linked
 4 back to, in the risk identification stage, the
 5 causes of the actual risk or the root cause.

6 Risk treatment is based on an
 7 understanding of how risks arise. This
 8 includes the need to consider the
 9 organization's culture. The report stated
 10 that there was no adequate investigation of
 11 complaints. There were even threats of
 12 retribution to those who saw it as their duty
 13 to raise issues about inadequate health care.
 14 Business conditions can change suddenly.
 15 Organizations need to protect themselves from
 16 disruption, interruption or loss in supplying
 17 their products and services. America's
 18 largest mass transit system ground to a halt
 19 because of the first strike in 25 years. It
 20 created traffic chaos and economic damage to
 21 retailers, restaurants and other businesses.
 22 Good business continuity plans are part of the
 23 overall management of risk within the
 24 organization. Sure, there are treatment but
 25 they should really be seen as part of that

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1 overall risk management regime that is saying
 2 how do I keep achieving my objectives and a
 3 good business continuity plan is really
 4 predicated on what are the objectives,
 5 therefore how do I have to manage if I have a
 6 disaster?
 7 The final step in the process is to
 8 monitor the risk management strategy plans and
 9 practices. Are there new risks? Will the
 10 risk treatment still be effective? Companies
 11 need to take a dedicated approach to keeping
 12 their risk management process and program
 13 alive because at the end of the day, risk is
 14 never static. You know, it's always changing.
 15 Situations are always changing. Therefore
 16 your risk management system or program needs
 17 to be responsive and needs to mature and
 18 change with the organization.
 19 Hearts of the business should all be
 20 looking at their risk registers and review it
 21 to see whether there's new risks, whether the
 22 things that they said were acceptable or
 23 tolerable are still tolerable, or have they
 24 been sitting over in the corner transmuting
 25 into two-headed monsters but then actually

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1 need a formal treatment program.
 2 At no stage were Dr. Patel's skill and
 3 competence assessed by a committee of his
 4 peers as required under government health
 5 policy and guidelines. So the monitoring and
 6 review, it's part of good management, but it's
 7 an integral part of risk management because
 8 you've got to make sure that you still
 9 understand what are your risks and what you're
 10 doing to manage them.
 11 Risk management is a logical and
 12 systematic process which needs to be
 13 integrated part of normal business.
 14 It's up to every manager, everybody with
 15 a delegation to clearly understand what are
 16 the risks that they manage and to make sure
 17 that they are managing them to achieve their
 18 objectives. The greatest risk though is to
 19 take no risk at all, because if we don't take
 20 risks, there's no advancement, there's no
 21 progress, there's no profitability.
 22 Whether it is launching a sail or
 23 launching a space shuttle, every organization
 24 has risks. At every level in the
 25 organization, the risk maker and the risk

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1 taker must be the risk manager. On the
 2 anniversary of the Apollo Challenger disaster,
 3 June Scobey Rogers, wife of Challenger
 4 commander Dick Scobey, said "he knew about the
 5 risks and accepted them as a test pilot." --
 6 and lift off of Space Shuttle Discovery,
 7 beginning America's new journey to the moon,
 8 mars -- She said "without risk, there's no
 9 discovery. There's no new knowledge. There's
 10 no bold adventure. The greatest risk is to
 11 take no risk."
 12 ROIL, Q.C.:
 13 Q. Ms. Turner, before we move on, two things
 14 arise out of that video that I'd like to touch
 15 with you briefly on. One is a mentioning of
 16 Global Risk Alliance, and I'm not sure that
 17 you made it clear in your introduction what
 18 your relationship is with that organization.
 19 MS. TURNER:
 20 A. Sure. Mr. Roil, Global Risk Alliance is the
 21 parent company that owns Aerosafe Risk
 22 Management. I'm the CEO of both organizations
 23 and we work in concert. Global Risk Alliance
 24 predominantly focuses on those projects
 25 outside the aviation industry, whereas

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1 Aerosafe Risk Management is the division
 2 within the group that focuses solely on the
 3 aviation aspects.
 4 ROIL, Q.C.:
 5 Q. Okay. The other thing that jumps out at me
 6 from watching the video, and unfortunately for
 7 those that are watching it at home, they
 8 wouldn't have seen perhaps all of the
 9 incidents that were shown, but it included the
 10 implosion of a building, the Challenger space
 11 disaster, some other disasters. It seemed to
 12 be focused on incidents that came out of
 13 disasters and whatnot. Now in this instance,
 14 we, of course, were given birth, this Inquiry,
 15 by of course the events, the tragic events of
 16 March the 12th and yet, we are to have a
 17 forward looking focus because, of course, the
 18 Transportation Safety Board looks at that
 19 incident and what gave cause to that incident.
 20 I understand that you have used this risk
 21 profile in another industry in the United
 22 States recently that wasn't driven by an
 23 incident, but rather was looking at the entire
 24 industry and would you tell us a little bit
 25 about that?

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1 MS. TURNER:
 2 A. Yeah, that's correct. The industry risk
 3 profiling process that I referred to earlier
 4 is a tool often used by government regulators
 5 in monitoring and providing safety oversight
 6 to a whole industry group. The recent
 7 assignment that we've undertaken this year in
 8 the United States was looking at the
 9 helicopter emergency medical industry, so the
 10 helicopter air ambulance industry that
 11 provides vital services to patients in need
 12 and certainly, you know, accidents that occur
 13 such as motor vehicle accidents, et cetera,
 14 and that quick response.
 15 We were actually engaged by industry and
 16 commissioned by Bell Helicopters Textron to
 17 undertake and use that same methodology that
 18 we've utilized with the Australian and New
 19 Zealand regulators and that is used more
 20 broadly with Transport Canada and the FAA in
 21 the States to actually do a self-motivated and
 22 self-driven industry risk profile of this
 23 helicopter medical field.
 24 ROIL, Q.C.:
 25 Q. And these are all separate companies, I take

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1 it?
 2 MS. TURNER:
 3 A. Yeah, that's correct. The industry definition
 4 itself consists of over 850 aircraft and over
 5 74 different air operating certificate holders
 6 or aviation companies and so the intent of
 7 that work was to really draw some boundaries
 8 around the industry and go all the way back
 9 into the structure and the design of the
 10 industry to have a look at whether there was
 11 issued or underlying risks that had the
 12 potential to put the squeeze on the
 13 operational end and induce the safety
 14 occurrences and accidents that we all want to
 15 prevent.
 16 ROIL, Q.C.:
 17 Q. So that, I take it, similarly had a forward
 18 looking--it wasn't looking at what went wrong
 19 in a particular incident. It was designed to
 20 improve safety in the industry?
 21 MS. TURNER:
 22 A. Yeah, that's right, and one of the things I'd
 23 like to cover later this morning is what is
 24 the relationship between the reactive after
 25 the event safety investigation process, to

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1 actually look at one accident and really
 2 understand what went wrong, with the
 3 relationship with the proactive and forecast
 4 look of the risks and the potentials that may
 5 be in place, and when we combine both bits of
 6 information, it really does give a complete
 7 picture. The industry risk profiling process
 8 does take that historical data and put it in
 9 as one input, but we also examine the
 10 structure, the environment, the stakeholders,
 11 the changes in the industry, the technology,
 12 the processes and the practices and really
 13 start to examine where there's potential
 14 vulnerabilities or potential cracks in the
 15 layers so that we can proactively, without
 16 waiting for an event to happen, we can
 17 proactively address and mitigate those risks
 18 to really strengthen the entire system.
 19 So just getting back to the assignment in
 20 the US, that has really been met with a great
 21 response. We've had over 65,000 copies of
 22 that report downloaded off the Flight Safety
 23 Foundation's website. The Flight Safety
 24 Foundation is an independent, not-for-profit,
 25 global safety foundation, predominantly

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1 focusing on the airline industry, but
 2 definitely has some great influence in the
 3 helicopter community. Although that risk
 4 profile was developed and funded by industry,
 5 the issue around consultation and interaction
 6 that you heard in the video is just so key to
 7 this process because if you don't engage and
 8 have the right interaction with the workers,
 9 with the unions, with the regulators, with the
 10 operators, with the association groups, with
 11 you know, the users of the actual service, you
 12 can't complete the picture, and so certainly
 13 with that assignment, it was fairly complex
 14 with over 161 different stakeholders in that
 15 and we did have interaction and touch points
 16 with all of those areas.
 17 So the outcome of that work now provides
 18 a profile that is open to that whole industry,
 19 whether they're a legislator, regulator, the
 20 operator or the user, the customer or the
 21 hospitals or the patients of that system. So
 22 it's a common platform that all of those
 23 different groups can use because everyone owns
 24 a piece of the puzzle, in terms of the risk
 25 solution and the reduction of risk,

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1 legislation, regulations, organizational
 2 practices or the requirements to use the
 3 service itself from the customer perspective.
 4 So that profile is now being used by all of
 5 those different areas in piecing together the
 6 puzzle on how they can collectively work
 7 together to reduce the risk profile of the
 8 entire industry itself.
 9 ROIL, Q.C.:
 10 Q. Okay. Well, we had a witness a couple of days
 11 ago who we asked to define a word
 12 "airworthiness" and that's not as common a
 13 word as risk, but what is risk?
 14 MS. TURNER:
 15 A. It's interesting, from a risk perspective.
 16 When we start going into what is risk, the
 17 definition used here is risk is a chance of
 18 something happening that could impact upon
 19 your objective. So you'll see there there's
 20 nothing about doom and gloom. There's nothing
 21 about an accident of any sort or an explosion
 22 at the front gate. It purely says risk is a
 23 chance of something happening that could
 24 impact upon your objective. Now when we're
 25 looking at the safety context, because I do

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1 want to draw this parallel between safety and
 2 risk, because they are separate disciplines
 3 but extremely related. So if -
 4 ROIL, Q.C.:
 5 Q. Before you go on to the next slide, the
 6 reference at the bottom, ISO 31000 Risk
 7 Management, just for those in the room and
 8 there'll be some and perhaps some that are
 9 listening, what is ISO 31000 Risk Management?
 10 MS. TURNER:
 11 A. Sure.
 12 ROIL, Q.C.:
 13 Q. Just briefly.
 14 MS. TURNER:
 15 A. The ISO or International Standards
 16 Organization is an international standard
 17 setting body that sets a whole range of
 18 different workplace standards and business
 19 process standards across many different
 20 industries. The flow of the hierarchy from
 21 ISO into the national standards, such as the
 22 Canadian standards body or the UK standards
 23 body, basically looks at setting these
 24 processes and practices in place. So the ISO
 25 31000 Standard is a recent initiative. It's

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1 been in the pipeline for the last three or
 2 four years, and ISO is made up of all those
 3 countries that subscribe to the international
 4 standards, Canada being one of those, and the
 5 process is actually quite deliberate and quite
 6 comprehensive to reach agreement on what that
 7 international position is. So the ISO 31000
 8 standard is actually based upon the previous
 9 Australia and New Zealand standard, which has
 10 been in place since 1995 and has gone through
 11 a series of iterations and is currently in a
 12 working--committee working draft, but as of
 13 last Tuesday, confirmation that all of the
 14 countries have now agreed and subscribed to
 15 that standard has been reached. So you can
 16 imagine it's quite a process, and that
 17 document is publicly available.
 18 ROIL, Q.C.:
 19 Q. So this definition that you've given us here
 20 comes from this ISO standard?
 21 MS. TURNER:
 22 A. That's correct.
 23 ROIL, Q.C.:
 24 Q. So it's not a Google definition, it's a little
 25 higher.

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1 MS. TURNER:
 2 A. No, that's right.
 3 ROIL, Q.C.:
 4 Q. Okay, good. Okay, you said now our focus is
 5 on safety risks. How does this get impacted
 6 by the definition?
 7 MS. TURNER:
 8 A. Sure. In looking at the difference between
 9 risk and safety, safety is often referred to
 10 as the freedom from harm, so really removing,
 11 you know, those issues that can cause harm or
 12 injury to people in particular. If we're
 13 looking at then what is safety risk, I've just
 14 inserted here the word "safety." So risk is a
 15 chance of a safety something happening that
 16 could impact upon an objective, or the other
 17 place of putting this is risk is a chance of
 18 something happening that could impact upon a
 19 safety objective, such as the safe
 20 transportation of our workers backward and
 21 forward to the oil rigs. So if our objective
 22 is to have safe and effective passenger
 23 transport, helicopter transport, then what are
 24 those things that could potentially prevent
 25 that from happening and that's actually what

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1 we're looking at from a risk perspective. So
 2 it could be a safety event that could impact
 3 on an operational or business objective or it
 4 could be an event or an issue of some
 5 description that could impact on a safety
 6 objective.
 7 ROIL, Q.C.:
 8 Q. And that, of course, is key to our mandate?
 9 MS. TURNER:
 10 A. Absolutely, and just to reiterate, there is
 11 that relationship between risk and safety and
 12 at an industry risk profiling level, you can
 13 not divorce the two. You cannot purely just
 14 look at the safety implications without taking
 15 into account the environment, the changes, the
 16 regulatory regime, the commercial pressures,
 17 et cetera. However, in saying that, right
 18 across many industries that we work all around
 19 the world, the safety of people and the
 20 protection of our asset and resource and our
 21 human capital is really one of those primary
 22 criteria that does rest above all else, and
 23 you can see that from the examples put forward
 24 in the DVD.
 25 ROIL, Q.C.:

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1 Q. Yes, indeed. So we now know what risk is.
 2 What is risk management?
 3 MS. TURNER:
 4 A. In looking at the risk management discipline,
 5 I really like this definition because it says
 6 risk management is a number of things. It is
 7 the culture and it's the processes and it is
 8 the structures that are directed towards that
 9 effective management of the opportunity, while
 10 minimizing the potential for that adverse
 11 event. But if we start looking at risk
 12 management and breaking it down in its purest
 13 form, it's the culture. Every organization
 14 has a culture. Every organization has an
 15 existing safety culture. You don't not have
 16 one. It's just whether or not you're
 17 satisfied that it's a culture that you're
 18 after.
 19 In terms of the processes, we all
 20 acknowledge that there are so many structures,
 21 plans, processes, procedures, manuals, in the
 22 offshore oil industry and all of those
 23 processes and structures are there to manage
 24 risk, and they've been designed over time to
 25 manage particular risk areas. So I guess the

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1 question comes, do you need anything else or
 2 how much is enough? And so in looking at risk
 3 management, it really is that combination of
 4 the people piece and the beliefs and the
 5 behaviours and the attitudes with all the
 6 structures and when you combine that together,
 7 those things hold true to really minimize the
 8 potential deficiencies or adverse effects and
 9 making sure that you're positioning the
 10 organization to achieve that objective that
 11 you're after, and in this case, that's the
 12 safe transportation of our workers to and from
 13 their place of work.
 14 ROIL, Q.C.:
 15 Q. In our preparation for today, and after you
 16 arrived in Newfoundland, you explained to me a
 17 rather whimsical little story about your taxi
 18 ride that gives us some little insight or
 19 window into safety culture.
 20 MS. TURNER:
 21 A. Absolutely.
 22 ROIL, Q.C.:
 23 Q. It was involving a taxi drive. I think we'll
 24 leave the name of the taxi company out of it.
 25 We can talk about it other than that.

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1 MS. TURNER:
 2 A. Thanks, Mr. Roil. It's really interesting in
 3 looking at risk management that the processes
 4 and the structures are the easiest part to do.
 5 Time consuming, but very tangible. Hence, why
 6 I say they're easy. Maybe not easy, but
 7 straightforward. So you know, those
 8 structures. The cultural piece is something
 9 that certainly intrigues people right around
 10 the world of what makes people behave in a
 11 certain way. You know, what makes people
 12 change their attitudes and their beliefs and
 13 ultimately their behaviour to make decisions
 14 in a certain circumstance. So going to the
 15 story, when I arrived on Saturday and I've had
 16 a number of different taxi trips around here,
 17 downtown.
 18 I was talking with the taxi driver and he
 19 asked what I was doing here in St. John's and
 20 I mentioned that I was working with the
 21 Inquiry and was looking forward to, you know,
 22 this process, particularly in outlining risk
 23 management, and his first thing he said was
 24 "oh, different companies have different
 25 standards." He said "wait a second, I want to

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<p>1 show you this" and he said "I have two 2 different types of receipts that we need to 3 fill out when people pay in the taxi ride," 4 and I've just forgotten the name. 5 ROIL, Q.C.: 6 Q. You don't need the name. There was a company 7 that has employees travelling. 8 MS. TURNER: 9 A. Yes. There is a company that has many 10 employees that travel and they actually have a 11 different receipt that the taxi driver needs 12 to fill out to the standard receipt. Now 13 what's different about this is that company's 14 focus on safety. On that receipt, there's 15 about four or five checkboxes that the taxi 16 driver needs to complete before he fills in 17 the dollar amount and it's "is the vehicle 18 road worthy? Was the driver wearing his 19 seatbelt? Was the driver using a mobile 20 phone?" et cetera, and he made this comment - 21 ROIL, Q.C.: 22 Q. Who fills this out? Does the taxi driver fill 23 it out or does the passenger? 24 MS. TURNER: 25 A. The passenger fills out a component and the</p>	<p>1 Q. I suspect that the Commissioner or others will 2 ask you a little more about culture as we go 3 through the piece. 4 MS. TURNER: 5 A. Absolutely, or check next time that you're 6 filling in your taxi receipt. 7 ROIL, Q.C.: 8 Q. Okay. You now have put a very complex looking 9 slide in front of us, so perhaps you can tell 10 us, either briefly or in a longer explanation 11 what it is that you're trying to show us here? 12 MS. TURNER: 13 A. Sure. This diagram that you can see in front 14 of you outlines the risk management process. 15 So those of you who can't visually see this 16 diagram, it's a flow chart and it has the 17 elements and the steps of the risk management 18 process. Some interesting things to note is 19 you'll see that there's no start or an end 20 point. You'll see that the arrows continually 21 cycle around and this very much is a iterative 22 process. So when we're managing risk or 23 positioning our self to management risk, it 24 never ends. So risk management is dynamic or 25 risks are dynamic. They're continually</p>
<p>1 taxi driver fills out a component. So both 2 have transparency and visibility of this 3 process. And he was actually quite enthused 4 when we were talking about culture that that 5 change in a process by adding a couple of easy 6 little checkboxes to a form actually changed 7 the behaviour, and he said "and I know when 8 that organization puts their staff in my cab, 9 I'm not answering my mobile phone" and so he's 10 behaviour will shift because of the design of 11 a process actually starts to get that cultural 12 change. Now wouldn't it be good if every 13 single passenger that got in the taxis here in 14 St. John's required that same level of 15 structure or checking? In no time, you would 16 soon see a shift in the behaviours and get 17 consistency of practice. 18 So why I thought that was a good example 19 is because safety culture or risk culture is 20 generally not very tangible and it's fluffy 21 and it's out there and difficult to define, 22 but it is so key to the way that people 23 behave, whether they're being watched or not 24 being watched, which is quite interesting. 25 ROIL, Q.C.:</p>	<p>1 changing, hence those arrows to really revisit 2 that change in the situation. 3 A couple of other things I'd like to draw 4 your attention to in this diagram, and this 5 has been drawn from that ISO 31000 standard 6 that we referred to earlier, and it was also 7 outlined on the DVD as those layers of 8 defences. In terms of this diagram, you'll 9 see that there's a shaded area that has the 10 word "risk assessment" around it. There is a 11 difference between risk assessment and risk 12 management. Risk assessment is purely the 13 identification and measurement of risk, 14 whereas risk management is then taking that 15 assessment and making decisions about its 16 appropriateness, about what level of risk 17 you're willing to accept or tolerate, 18 communicating with the right players to ensure 19 that people are aware of the various things 20 that need to take place, and basically 21 actioning and activating activities to make 22 sure the risk treatment strategies or the 23 solutions are implemented. So I just wanted 24 to draw your attention to that difference of 25 risk assessment and risk management.</p>

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1 The last thing I wanted to point out on
 2 this diagram and certainly I could spend hours
 3 or even days going through the depth of the
 4 science that sits behind this, but the good
 5 news is there is a science. There is a
 6 process and a structure and we'll be working
 7 through that over the course of the next few
 8 months. That final point I wanted to draw
 9 your attention to is that first--well, I guess
 10 you could call it a first step, the
 11 establishing the context phase. We would
 12 normally spend 40 percent of our time in that
 13 box alone. So it's quite an important step
 14 because if you're trying to identify the risks
 15 of a certain situation and you can't
 16 effectively define the boundaries or the
 17 industry itself that you're working in, you'll
 18 find that the assessment can meander or not
 19 get the clarity that it's after. So in the
 20 case of the helicopter transportation in the
 21 offshore oil industry here, what is the
 22 industry? Is it the aviation industry? Is it
 23 the helicopter industry? Is it the offshore
 24 oil industry? Is it the broader oil and
 25 petroleum industry? So all of those questions

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1 need to be answered as to where we're going to
 2 put in the boundaries and I note this map up
 3 here and certainly if we were to draw some
 4 boundaries around that area, there's various
 5 new things that are emerging in terms of new
 6 exploration. What impact will that have?
 7 Well, that might shift the context of the
 8 requirement for helicopter transportation, the
 9 distances, the lengths, possibly the aircraft
 10 capability. All of those things will change
 11 in time and so it's important, from an
 12 industry risk profiling perspective, for us to
 13 define some clear and good boundaries that
 14 when there is a shift, we recognize it and
 15 then can reassess.

16 ROIL, Q.C.:

17 Q. If you look at the way that the Inquiry has
 18 been structured, can you tie in any of these
 19 steps that are listed one under the other to
 20 establish the context and identify the risks,
 21 where in our phases we would be able to find
 22 and to work on these issues?

23 MS. TURNER:

24 A. Yeah, that's a good question. My approach
 25 towards that would be this Phase 1A is

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1 instrumental in establishing the context.
 2 We're hearing information from the Petroleum
 3 Board, from the aviation regulators, from the
 4 operators, from the helicopter operator, all
 5 the way through to all the interested parties
 6 and so once that takes place, I think we're
 7 going to have a very clear definition of what
 8 that context is that we're looking at. Also
 9 in this Phase 1A, there's going to be a range
 10 of different issues that will emerge through
 11 the conversation and through the material that
 12 is presented. So I would say that
 13 establishing the context and identifying risk
 14 would very much fall in this first public
 15 hearing phase.

16 Phase 1B, when we sit back to actually
 17 prepare the information for the Commissioner's
 18 consideration and distil what all of that
 19 documentation, et cetera, is saying, I think
 20 it's going to be very key in really clarifying
 21 the risks themselves at different levels.
 22 Once we have that information, and when I say
 23 "we" I very much want to draw your attention
 24 to that communicate and consultation. It's
 25 not Aerosafe or Kimberly Turner or an

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1 independent. I say "we" collectively as all
 2 the interested parties, because everyone has a
 3 piece of the puzzle in terms of where the
 4 issues are or the potential issues could be.
 5 And then as we roll through that analyze and
 6 evaluate stage, I'd say what will take place
 7 towards the end of Phase 1B. Then when
 8 Transport Canada comes out with their report
 9 and -

10 ROIL, Q.C.:

11 Q. Transport Canada?

12 MS. TURNER:

13 A. Sorry, Transport Safety Board comes out with
 14 their accident investigation report, that's
 15 another good opportunity to revisit that
 16 cycle, have a look at whether there's any
 17 information that is pertinent to completing
 18 the risk profile and in particular, looking at
 19 some of those treatment strategies, so there's
 20 an opportunity there.

21 The last aspect I will say is when you've
 22 got a list of risks that are worthy of
 23 attention, that's actually not the ultimate
 24 aim in risk management. The ultimate aim is
 25 on the other end. It's to proactively put

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1 things in place to provide a high level of
 2 confidence or assurance that those risks are
 3 being managed. So I refer to those as risk
 4 treatment strategies. Many people in the
 5 safety field call those risk mitigators,
 6 solutions, resolutions. It doesn't matter
 7 what you title those, but those treatment
 8 strategies really are best developed when they
 9 come from those who work in the industry
 10 itself. So there's going to be a great
 11 opportunity for contribution to risk treatment
 12 strategies and certainly we'll be actively
 13 working and encouraging innovative solutions
 14 that may or may not always--sorry, currently
 15 be in place.

16 ROIL, Q.C.:

17 Q. Just on the apparent circuitry of it, keep
 18 going at it, I take it that--you made a
 19 reference to our map and we had some evidence
 20 that most, if not all of the really active
 21 work is going on in the Jeanne d'Arc Basin.

22 MS. TURNER:

23 A. Um-hm.

24 ROIL, Q.C.:

25 Q. Yet I heard a media report about another

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1 company that's going to be working somewhere
 2 close to the Baquette.

3 MS. TURNER:

4 A. Yes.

5 ROIL, Q.C.:

6 Q. Which is that little corridor that leads into
 7 the islands of St. Pierre and Miquelon. Is
 8 that a fact that might change some of the--
 9 does it create new risks or does it create
 10 opportunities for new challenges or new
 11 solutions? What happens when something like
 12 that happens?

13 MS. TURNER:

14 A. Yes, certainly. The first thing when there is
 15 a change, there's a shift in the context. So
 16 if the context actually shifts, that's a
 17 trigger to reassess. So one of the things, as
 18 we piece together this industry risk profile,
 19 we need to make a determination of where do we
 20 put those boundaries? Are we looking at the
 21 next five years and the potential change that
 22 might occur in that? Are we looking now in
 23 the next six months? How far do we want to
 24 draw that circle? Is it just in those areas
 25 that currently use helicopter operations or is

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1 it those areas that could potentially use
 2 helicopter operations in the coming period?

3 From a regulator's perspective, when
 4 there's industry risk profiles used for
 5 aviation oversight, they're generally redone
 6 about once every two years. Why? Because
 7 there's generally a significant development or
 8 evolution of the industry sector from
 9 technology or environmental or, you know,
 10 those various pressures that will shift enough
 11 to warrant a reassessment.

12 ROIL, Q.C.:

13 Q. Okay. We can move on to the next set of
 14 slides.

15 MS. TURNER:

16 A. Okay. What I've prepared here, I just wanted
 17 to talk about provision of governance and
 18 oversight for helicopter transportation
 19 safety, particularly in relation to the
 20 offshore oil industry in this area. When
 21 we're actually looking at how do you set up a
 22 regime or how do you confirm that the regime
 23 is adequate? We're looking at the safety of
 24 this helicopter that you can see on your
 25 screen. However, this helicopter is actually

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1 subject to various components and I'll just
 2 give an explanation around why we use this.
 3 When we're talking about helicopter safety,
 4 we've got both the aviation company that
 5 provides the crew, the aircraft, the
 6 procedures, the certification and the
 7 airworthiness that you mentioned before.

8 ROIL, Q.C.:

9 Q. And that's the blue part of the picture?

10 MS. TURNER:

11 A. That's half of the picture, and we'll take it
 12 as the blue part. But then we've actually got
 13 the other component of those involved in the
 14 helicopter operations, which are the
 15 passengers, the oil workers that get in the
 16 back of the aircraft, and the engagement, the
 17 contracts, the requirement to have--use this
 18 service. So when we're looking at helicopter
 19 safety, we've got those two different
 20 components. Now those two components both
 21 come under their own regime. They have their
 22 own layers of procedures, policies, training,
 23 structures, regulation. So from the aviation
 24 perspective, the helicopter company will have
 25 their own operations manual, procedures,

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1 training, company policies, leadership, all
 2 the way back into the regulatory framework we
 3 heard about last week from Transport Canada.
 4 As is the case with the other piece, or
 5 the green piece, the offshore oil industry has
 6 their staff, their protocols, their
 7 procedures, the issuing of equipment, the
 8 contract engagement, the policies, the
 9 structure, all the way back into the
 10 regulatory framework for that industry itself.
 11 So why is this important? Because those two
 12 areas intersect in the aircraft itself. Every
 13 time it goes out on a task, every time it
 14 takes the staff out to the platform, those two
 15 regimes intersect in a small little aircraft,
 16 you know, with 15 to 20 people on board. So
 17 why is that important? The aviation aspect
 18 has full control over their aspect, yet can
 19 influence the other element through practices,
 20 training, interaction, engagement and
 21 influence. Just as is the case, the
 22 operators, the oil operators that engage the
 23 aircraft, have full control over the price
 24 that they're prepared to pay, the
 25 specifications that they're willing to

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1 mandate, their requirements, their volume, you
 2 know, the number of times that they want to
 3 fly, whether or not we want to now change the
 4 scope of the service being provided and staff
 5 operating out of a different area, if that
 6 exploration is successful and it moved into
 7 production. So just as the aviation company
 8 has control on their part, but influence into
 9 the other, the petroleum companies have
 10 control over their part and influence by
 11 contracts, training, standards, relationships,
 12 communication.
 13 So this nuance around control and
 14 influence is really important and I find that
 15 it does help give clarification as to how the
 16 whole regime actually works. So ultimately
 17 what we're after, from the safety of an
 18 aircraft, is for these two different regimes
 19 that intersect in the aircraft to be
 20 integrated, to work in concert with each other
 21 and to really gel from that part. So you'll
 22 see a lot of the concepts that underpin this
 23 industry risk profiling process are predicated
 24 on this philosophy or this idea.
 25 ROIL, Q.C.:

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1 Q. We actually have a fairly significant part we
 2 now have to go through, Commissioner. It
 3 might be perhaps a better time now to take a
 4 little break and -
 5 COMMISSIONER:
 6 Q. Okay. We'll take a break now for 15 minutes.
 7 (BREAK)
 8 COMMISSIONER:
 9 Q. Please be seated.
 10 ROIL, Q.C.:
 11 Q. Now, Ms. Turner, this morning earlier we
 12 introduced the concept of risk profiling, so
 13 perhaps you would now like to tell us a little
 14 bit more about the detail of that process?
 15 MS. TURNER:
 16 Q. Sure. In looking at industry risk profiling,
 17 as I mentioned this morning it really is the
 18 strategic application of the risk management
 19 process at an industry level, and so I'd like
 20 to start at that high level, and then as we
 21 work through this process you'll see that I'll
 22 become more operationally focused, which I
 23 know will be of interest to many of the people
 24 listening to this presentation. In terms of
 25 an industry risk profile, I have a definition

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1 here. "The industry risk profile"--or "an
 2 industry risk profile, presents a strategic
 3 picture of those issues that may induce risk
 4 at the systematic or structural level of a
 5 particular industry sector at a point of
 6 time." So in terms of that, as I mentioned,
 7 it really is looking an industry sector. We
 8 talked before about the importance of defining
 9 that in an adequate way, and we're looking at
 10 those areas which may not necessarily be
 11 direct safety issues, but if we were to take a
 12 safety event and we say, "Well, why did that
 13 happen," and then we worked backwards to a
 14 factor and then we say, "Well, why did that
 15 factor happen?" "Why did that factor happen?"
 16 We're literally going back four or five or six
 17 layers into the why, and so what I'd like to
 18 do is just take us through that a little bit.
 19 When we're developing an industry risk
 20 profile, it does follow the risk management
 21 process as outlined in the ISO301000 standard.
 22 As I mentioned, the first thing you need to do
 23 is define the industry, and we're starting to
 24 through this process listen and take onboard
 25 the information being presented to try and

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1 distil where those boundaries could be placed,
 2 and I look forward to having some dialogue
 3 with all the interested parties and with the
 4 Commissioner and the legal teams to really get
 5 some agreement around the appropriateness of
 6 that scope. In terms of the core objectives,
 7 given that the inquiry's focus is looking at
 8 providing a high level of confidence around
 9 the processes that are in place, and the
 10 regimes and structure that are in place around
 11 helicopter transportation, our core objective
 12 is really looking at that safety aspect, but
 13 in saying that we will consider the broader
 14 environment in which these helicopters operate
 15 to move forward. We talked before about the
 16 risk profile constantly changes, so risk is
 17 fairly dynamic and when we're compiling the
 18 risk profile, what we need to do is look far
 19 enough into the future to identify what those
 20 potential changes may be, and then put a line
 21 in the sand and incorporate those potential
 22 changes in the assessment itself.
 23 ROIL, Q.C.:

24 Q. Do I take it that what we are doing today or
 25 what we do over the next number of months will

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1 not necessarily be a piece of work that can be
 2 considered as all that is needed for the next
 3 10 years.
 4 MS. TURNER:
 5 Q. Absolutely, and the trigger to decide when you
 6 reassess or redo profile is predicated on two
 7 things. One, if there's a significant shift
 8 in the industry itself, and it may be that
 9 there's just an explosion of growth in the
 10 area that the regime then needs to be adjusted
 11 to cater to that change, or at a periodic time
 12 to actually revisit that, and generally from a
 13 regulatory perspective it's roughly around two
 14 years where that could take place. When we're
 15 compiling an industry risk profile, I must
 16 stress that it isn't a quantitative assessment
 17 process, so we're not looking to pinpoint a
 18 particular risk number, one in a million
 19 chance, one in ten million chance. It really
 20 is a cumulative total of a lot of different
 21 qualitative inputs, and what we actually do is
 22 we try and layer that data, and where we pull
 23 out consistent themes those issues then are
 24 considered with a higher level of integrity or
 25 consistency and will make their way onto the

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1 profile. So in terms of once we have the
 2 boundaries of the profile defined, we then
 3 need to look at, "Well, where are we going to
 4 get the information from," and certainly this
 5 process of presentations from the various
 6 organizations of how they operate will be a
 7 fantastic data input source, so need to be a
 8 dialogue and conversations in interaction with
 9 each of the stakeholders and the parties, and
 10 this really is a two-way process. As I
 11 mentioned before, it's not a pure,
 12 independent, scientific assessment to
 13 criticize or to find fault, but more an
 14 interactive, collaborative process to really
 15 examine the whole set-up and look at what are
 16 those areas that are worthy of future and
 17 continuous monitoring as that protocol
 18 changes.
 19 ROIL, Q.C.:

20 Q. And, I take it, that this would be akin to
 21 what we have called "issues or opportunities
 22 for improvement."
 23 MS. TURNER:

24 Q. Absolutely, that's a really good definition
 25 there. So in terms of looking at the risk

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1 profile itself, if we just come to that
 2 definition of risk, if risk is the impact--
 3 sorry, if risk is the chance of something
 4 happening that could impact on our objective,
 5 what we need to do is look at that industry
 6 set-up as a whole, and as I mentioned the
 7 objective is the safe transportation of our
 8 workers to the oil platforms.
 9 ROIL, Q.C.:

10 Q. So here we have a rather interesting slide
 11 with a bunch of holes in it. I take it, that
 12 this is not something that you have invented?
 13 MS. TURNER:

14 Q. No, that's correct. This concept is actually
 15 widely recognized in the aviation and safety
 16 communities right around the world, originally
 17 developed by Professor James Reason, who is a
 18 renowned psychologist and safety expert
 19 particularly in accident causation models.
 20 When you heard from the Transport Safety
 21 Board, they actually referred to their
 22 investigation process where they identified
 23 various defenses that are in place, and
 24 they're looking for where the breakdown
 25 occurred in those defenses. This, commonly

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1 referred to as swiss cheese model, is much
 2 easier than the reason model, can be used
 3 either in accident investigation or in the
 4 proactive forecast, forward-looking, risk
 5 management process, so what I would like to do
 6 is just talk you through this because it gives
 7 some perspective as to where the industry risk
 8 profiling process sits in the scheme of
 9 aviation safety.

10 ROIL, Q.C.:

11 Q. Okay, and if we go back to that model that we
 12 saw in the video where they had the various
 13 disks with a little hole in the disks through
 14 which something penetrated and caused an
 15 incident, I take it, that's using the same
 16 sort of methodology as you're using here?

17 MS. TURNER:

18 Q. Yes, it is. That, actually, video was based--
 19 or that concept was based on this swiss
 20 cheese, or Professor James Reason's model.
 21 When an accident occurs, and this even
 22 happens, you know, from a family situation
 23 when something goes wrong, it's never one
 24 thing that you can pinpoint that caused the
 25 accident. It's generally--we've heard the

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1 term "links in the chain" or a "series of
 2 events" or "everything lined up." The planets
 3 aligned and that issue occurred. This swiss
 4 cheese model is really along those lines as
 5 well that, you know, as these different links
 6 in the chain potentially had cracks, when we
 7 all line up that's where we get an event or an
 8 accident. Now interestingly enough from an
 9 aviation safety perspective, many people state
 10 that there is no accident that is exactly the
 11 same, that every accident is a different
 12 combination of factors that might come from
 13 the layers of defense, but it's never the same
 14 combination as such, and so in looking at this
 15 accident causation model, the industry risk
 16 profile is predominantly looking at this end
 17 that high-level end in terms of industry
 18 structure and oversight. It does take into
 19 account the organizational factors and
 20 structures at a company level. These are in
 21 this case the petroleum companies or the
 22 aviation companies themselves.

23 ROIL, Q.C.:

24 Q. What about the oversight provided by
 25 organizations like Transport Canada or the C-

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1 N-L-O-P-B? Would that be looked at in this
 2 model?

3 MS. TURNER:

4 Q. Yes. Those different regulatory bodies would
 5 really fit into that industry structure and
 6 oversight level. However, they have
 7 significant control and influence at that
 8 organizational level because those
 9 organizations work to the compliance
 10 requirements. This last aspect--so when we're
 11 looking at the industry risk profile, we're
 12 focusing predominantly on the industry
 13 structure and oversight level. We're looking
 14 at the relationship of how that interacts with
 15 the organizations, and the collective views.
 16 They're not necessarily just one company, and
 17 keeping in mind that at the moment there's one
 18 aviation provider to this industry sector.
 19 That's not to say that down the track, you
 20 know, if the context shifts that this
 21 structure wouldn't apply to others that may
 22 operate in this industry itself, and then
 23 thirdly we have the operational risks. Now
 24 it's really interesting that the operational
 25 risks or hazards are so obvious and come to

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1 mind--they're at the forefront of all our
 2 minds, the treacherous weather, flying at
 3 night, mechanical issues, human factors,
 4 spatial disorientation, you know, all of those
 5 hazards that occur--or the aircraft itself is
 6 subject to it very much at the operational
 7 level. There are so many processes and
 8 structures and cultural traits and behaviours
 9 that are trained at that operational level in
 10 air crew, and in particularly the pilots or
 11 the maintenance staff or the management team,
 12 etc., that really runs the aircraft, and a lot
 13 of focus has being placed in the last 20 years
 14 around minimizing human error, pilot error,
 15 and those type of things there as well, so
 16 that operational end is -

17 ROIL, Q.C.:

18 Q. I think that's very helpful to us to
 19 understand what operational means. Perhaps
 20 you could similarly take the organizational
 21 and structural and add some examples.

22 MS. TURNER:

23 Q. Some examples?

24 ROIL, Q.C.:

25 Q. Yes.

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<p>1 MS. TURNER: 2 Q. Yes, sure. 3 ROIL, Q.C.: 4 Q. So we can follow through as to the different 5 levels in the organization. 6 MS. TURNER: 7 Q. Yes, sure, so just reiterating that 8 operational level assessment is really 9 considering the hazards, the hazards of 10 flight, the weather conditions, the time of 11 day, the length and duration, really that 12 front end aircraft. As we worked back into 13 the organizational layers or defenses, we'll 14 be considering the policy framework. We'll be 15 considering the training that the staff 16 undertake, the recruitment and selection 17 process, the various regimes, be that 18 maintenance regimes, operational tasking, 19 passenger briefing, the leadership, the 20 culture, so at that organizational level we're 21 looking to management practices. We're 22 looking at company policies. We're looking at 23 the structures set up by the organization 24 itself, and I must just state and acknowledge 25 that from what we've seen in the aviation</p>	<p>1 potential cracks or these holes that will 2 change over time, and really be proactive in 3 plugging those. Okay, just finally looking at 4 the examples of that industry structure on 5 either side, we're looking at the industry 6 governance arrangements, how assurance is 7 provided, so who actually checks what and at 8 what level and to what level of depth? We'll 9 be considering the intersection at a 10 regulatory and a policy level to really give 11 that light and that clarity to that picture we 12 saw before in terms of that aircraft. So you 13 know how we had the aircraft and it was 14 divided in two, and then we had the, I guess, 15 levels and layers that went all the way back 16 to the regime. Those levels and layers are 17 almost like this, the closest to the aircraft, 18 operational things. 19 ROIL, Q.C.: 20 Q. Yes, so the things that the Transportation and 21 Safety Board called defenses, you would take 22 them as being pieces of the cheese, if you 23 will, that we will also look at, but we will 24 start at the top and work down? 25 MS. TURNER:</p>
<p>Page 74</p> <p>1 industry globally and in the oil industry 2 globally, those organizational defenses are 3 very strong, and it's interesting just 4 anecdotally. With the aviation industry, if 5 you were to carve it up and slice it up, the 6 aviation industry is very diverse from 7 airlines to general aviation, helicopter 8 operations, airports, maintenance, companies, 9 et cetera. So you have the aviation industry. 10 The helicopter industry is a sector, and then 11 the offshore helicopter industry is yet a sub- 12 sector of the helicopter regime. Now it's 13 interesting, because of the influences of the 14 oil companies on the aviation contractors, 15 those aviation companies that contract to the 16 oil industry or, say, the mining industry, are 17 generally recognized as having standards that 18 are beyond the minimum regulatory compliance 19 required by Transport Canada and are really at 20 that better practice level, and so I just 21 wanted to put that in context because just 22 because we're undertaking an industry risk 23 profile doesn't imply that there are huge gaps 24 or deficiencies, but rather it's an 25 opportunity to just keep on looking at these</p>	<p>Page 76</p> <p>1 Q. That's right. 2 ROIL, Q.C.: 3 Q. Okay, and which way do they start? 4 MS. TURNER: 5 Q. That's right, so we'll work at the top of the 6 industry level and work down and have those 7 touch points. When an accident occurs--and so 8 I'm just shifting a gear from after an 9 accident through to proactive risk management. 10 We've just gone through the proactive part. 11 We'll start at the strategic and work down to 12 the operational. When an event or an accident 13 occurs, generally you start at this end. You 14 start at the operational end. What actually 15 went wrong? Why did the aircraft crash? What 16 were the environmental factors at the time? 17 What were the crew factors? What were the 18 mechanical factors? What were the air 19 worthiness factors? So all of those things 20 are at the operational level. Once that's 21 actually ascertained from an investigation 22 perspective, then they'll move back into that 23 layer of the organization. Well, what was the 24 training regime? What was the policy regime? 25 What was the utilization of the aircraft?</p>

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1 What was the task profile flown? Was that
 2 mandated? How did that actually work? So in
 3 the investigation process, that is definitely
 4 examined. However, the question is raised,
 5 does that accident investigation process go
 6 all the way back into the industry sector? My
 7 professional opinion would be "not so." The
 8 reason or the justification for that would be
 9 if an accident occurs and that accident
 10 investigation takes place, the organization
 11 that was involved in the accident would be
 12 very much reviewed and subject to that
 13 investigation. It's very uncommon for an
 14 investigation authority to then conduct that
 15 same level of investigation on the other
 16 companies that are involved in that sector.
 17 ROIL, Q.C.:
 18 Q. Yes, so it's an event-driven process that is
 19 tied then to the company that had the event
 20 happen, is it?
 21 MS. TURNER:
 22 Q. That's right.
 23 ROIL, Q.C.:
 24 Q. Yes.
 25 MS. TURNER:

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1 Q. Now just in saying that, obviously if there
 2 are issues that go beyond the organizational
 3 level, the investigation agency in all
 4 different countries would look further back
 5 into that area, but maybe not to that level of
 6 depth. So you can see that if we combined
 7 what the TSB does with its proactive, forward-
 8 looking industry risk profiling process, it
 9 actually gives you a beautiful alignment
 10 working from two different ends of the
 11 picture. So in terms of that swiss cheese
 12 model, I find that it's quite a easy concept
 13 to grasp. We've got all of these different
 14 layers of cheese. There are holes in the
 15 cheese that don't necessarily always line up.
 16 They're not cut from the same cloth. However,
 17 if those holes are there, the risk management
 18 process should lead us down the path of
 19 identifying what holes are in the cheese, and
 20 the risk assessment part is determining how
 21 big are those holes, how many of them and how
 22 large they.
 23 ROIL, Q.C.:
 24 Q. So, I take it, our objective in the swiss
 25 cheese model is to make the holes as small as

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1 they can possibly be, and then try as much as
 2 possible to make sure that they don't line up.
 3 MS. TURNER:
 4 Q. Absolutely, and you're spot on with that,
 5 John, and the risk treatments step of the risk
 6 management process--that flow chart that we
 7 saw is all about closing those gaps, or
 8 closing those holes.
 9 ROIL, Q.C.:
 10 Q. Okay, I think your next slide takes us to an
 11 interesting wheel.
 12 MS. TURNER:
 13 Q. What I wanted to do is just talk about the
 14 industry risk profiling methodology. So if we
 15 understand that the first step is we need to
 16 establish the context, and there's a bit of
 17 work involved in that. The second is we need
 18 to do our data collection and really start to
 19 look at the information available, and the
 20 third part is once we have all that
 21 information sitting on the table, how do you
 22 actually organize and structure that
 23 information for it to be presented in a
 24 logical way? That's where this industry risk
 25 profiling model comes into play. Just to give

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1 you the history of how this was designed, this
 2 was developed by our organization about six
 3 years ago when we were working with the New
 4 Zealand regulator, the Civil Aviation
 5 Authority in New Zealand. I must say that
 6 from a regulatory perspective a lot of
 7 innovation comes out of New Zealand so
 8 potentially because they're quite small and
 9 forward-looking, that about 15 years ago in
 10 New Zealand they had a shift in philosophy
 11 around their regulation, and they moved to a
 12 risk-based, oversight model, so the whole
 13 legislation changed. The Act changed, and as
 14 a result the way that they actually conducted
 15 their surveillance and intervention on the
 16 aviation industry, actually shifted as well.
 17 So in New Zealand they have a process of doing
 18 risk assessments on every single aviation
 19 company in the country, and they can rank
 20 those organizations from highest risk to
 21 lowest. They can then split them up into
 22 sector groups so they could give you protocol
 23 in the helicopter community, the airport
 24 community, the airline community, flying
 25 training schools, the tourism industry, the

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1 medical industry, et cetera. Now it's
 2 important to note that when you're doing these
 3 type of assessments, they don't stay the same,
 4 and so one of the great pieces of innovation
 5 that has come out New Zealand is actually
 6 developing a series of change triggers. When
 7 do you actually reassess these companies?
 8 When does the order actually change? Now the
 9 reason why a regulator would want to conduct a
 10 risk assessment on every company is to rank
 11 them from highest to lowest, so that when they
 12 go out and they audit and do their inspections
 13 they're putting their efforts in the area of
 14 greatest risk, and we all know that resources
 15 are not unlimited, and so somewhere you're
 16 going to actually run out of inspectors, and
 17 so the question is where you run out of that
 18 resource, is that line okay or do we actually
 19 need to go further because of the risk
 20 profile? So just in going to the methodology
 21 in working with the CAA, New Zealand, through
 22 this process there's a lot of data collection,
 23 there's a lot of automation, there's a lot of
 24 assessment that takes place, and we were asked
 25 to get involved about six or seven years ago

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1 in really doing a technical review on the
 2 classification of risk, and actually looking
 3 at the input sources to see if they were
 4 adequate, and really ensuring that the process
 5 aligned with the pre-documented ISO standard
 6 on risk management and really getting that
 7 integrity so that the assessment was
 8 consistent with reality.
 9 ROIL, Q.C.:
 10 Q. So I think, if I take your message, if it is
 11 that good things can come from small islands
 12 you are preaching to the converted.
 13 MS. TURNER:
 14 Q. Yes, I thought that might strike a chord. So
 15 with that structure these factors were, I
 16 guess, defined. We have subsequently used
 17 this methodology with regulators in Australia,
 18 New Zealand, in Asia. Most recently we've
 19 conducted this assessment on the helicopter
 20 medical industry in the United States.
 21 Transport Canada as recent as June this year,
 22 we've conducted training on these concepts
 23 with 80 senior staff across the multi-modal
 24 aspects of rail, marine, aviation and security
 25 so, really, around putting these structures in

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1 place it's important to get this definition to
 2 organize the data. So what I'd like to do is
 3 just briefly talk you through this industry
 4 risk profiling model, and what I'd like to do
 5 is just talk through each of the elements, but
 6 I'd like to explain why it's included in the
 7 industry risk profile, and maybe give some
 8 practical examples as we walk through.
 9 ROIL, Q.C.:
 10 Q. Yes, I think an example of each of them would
 11 probably be helpful for us to understand where
 12 the various pieces of the puzzle fit.
 13 MS. TURNER:
 14 Q. Yes, fantastic. Now normally when I explain
 15 this model, I start at oversight and work my
 16 way clockwise. I might just go the other way
 17 for a second because, given that our focus is
 18 safety orientated, maybe we'll start with the
 19 safety profile. So the reason why this is in
 20 the profile is because when we're looking at
 21 the complete risk picture we're not just
 22 looking at the potential, but we're also
 23 looking at the factual and historical view.
 24 So in terms of the safety profile what we're
 25 looking at is the inputs from incident reports

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1 and occurrences and accidents that have
 2 occurred in the industry. Now given that we
 3 have a small industry sector group here, and
 4 it's a small sample section, we may choose,
 5 depending on the interaction and consultation,
 6 to go a little bit broader and to maybe look
 7 at other offshore oil accidents in this
 8 helicopter area to broaden the sample space,
 9 or we may choose to look closer and look
 10 through some information.
 11 ROIL, Q.C.:
 12 Q. And by other offshore incidents, you're
 13 talking about in other jurisdictions of the
 14 world.
 15 MS. TURNER:
 16 A. Yes, in other jurisdictions in the world
 17 possibly with the same aircraft task, possibly
 18 with a similar task profile backward and
 19 forward to the rigs now. I'll get to it when
 20 we get around to the activity profile, but I
 21 do acknowledge that there's more than one
 22 different job that these helicopter companies
 23 actually undertake, so the safety profile is
 24 one input source into the profile. Yet in
 25 combined with everything else, one-tenth of

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1 that isn't enough to bias it so that we're
 2 only looking at one single event. In terms of
 3 the system's profile, what we're looking at
 4 here is the management system. We're looking
 5 at the communications systems. We're looking
 6 at the business systems. We're looking at the
 7 safety management systems. So why is this
 8 important, because if risk management is the
 9 culture, the processes, and the structures,
 10 these systems will actually give us a great
 11 indication as to the health of the processes
 12 and the structures, so that's what we'll be
 13 examining in that area. So the practical
 14 examples of what could be looked at is does
 15 the organization has a safety management
 16 system? How does it work? Where would the
 17 organizations like to see it enhanced or
 18 improved, et cetera? This next aspect I know
 19 is near and dear to the hearts of many in the
 20 room today, and certainly those joining us by
 21 Webcast. The passenger and participant
 22 profile is a key input into the industry
 23 profile, and I'll give you an example that's
 24 outside the offshore oil industry. We
 25 recently did actually last year a profile of

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1 the parachute industry down in Australia. Now
 2 it's interesting in looking over the last 10
 3 years that passenger and participant profiles
 4 had actually shifted very significantly from
 5 initially being a group of sports aviators who
 6 were parachute jumpers who would go and
 7 undertake competitions, and skydivers who
 8 would get involved in that. Over the last 10
 9 years it's actually gone from a sport and
 10 recreational industry and competitions through
 11 to a very commercially driven tourist industry
 12 attracting a lot of overseas non-English-
 13 speaking tourists to undertake that fun,
 14 adventurous activity. So there's been a huge
 15 shift in the passenger and participant profile
 16 from one that's very small and contained to
 17 one that's extremely public and open, and when
 18 you now have, you know, 40 to 50 percent of
 19 your participants that are coming from Asia
 20 who aren't comfortable or used to the English
 21 language, your whole regime needs to change in
 22 terms of having translation in the safety
 23 briefs in providing information, et cetera.
 24 Now I know there hasn't been as radical a
 25 shift in your passenger participant profile

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1 here. However, in this aspect we'll consider
 2 crews getting in the back of these aircraft,
 3 their level of training and what's provided.
 4 The cultural aspects, the comfort level, and
 5 certainly this is where we see the possibility
 6 of interacting with the workers, the unions,
 7 other people that might actually get in the
 8 back of the aircraft. I'm sure there's a
 9 range of visitors and other people who would
 10 do the one-off and, Commissioner, I understand
 11 that you've been one of these participants in
 12 this activity as well, and so really looking
 13 at the broader aspects of that profile, so
 14 there's a great opportunity to pull that input
 15 into this picture so you see that it is very
 16 inclusive. The industry operating environment
 17 is a really good element of this risk
 18 profiling as well, so perhaps the things we're
 19 going into here are what is actually going on
 20 in the oil industry? What are the
 21 requirements and the expectations, the global
 22 standards, the better practice aspects in the
 23 oil industry in relation to helicopter
 24 operations and helicopter safety itself. We
 25 talked before and we gave that example around

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1 the maps that we see up the front. That's an
 2 industry operating environment and, you know,
 3 any potential shift or development or
 4 evolution in that would be picked up under
 5 that category. The next one here is a real
 6 tangible one from an aviation perspective.
 7 The aircraft's capability profile really goes
 8 into the facts, the figures, and the
 9 specifications of the airframe itself. I was
 10 going to use the word, "platform," but I know
 11 that has a different connotation and meaning
 12 in this joint environment, but aviators often
 13 refer to an aircraft type as a platform or a
 14 capability. So that aircraft capability
 15 profile is looking at the type of aircraft,
 16 the specs, the equipment, the range, the
 17 suitability, whether it's fit for purpose and,
 18 you know, really looking at that tangible
 19 piece there. So obviously that has a fairly
 20 large impact on the industry risk profile
 21 itself. Moving to this next one, the activity
 22 profile--another term that could be used here
 23 is the type of tasks that are undertaken by
 24 the helicopter. We've been focusing on the
 25 transit of passengers on this routine,

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1 backward and forward to the oil rigs. I'm
 2 sure there's a range of other activity
 3 profiles that take place, for instance,
 4 evacuation of people off the rigs, medical
 5 evacuations that might take place, which may
 6 not be on that schedule, yet might be an out-
 7 of-sequence--there's possibly training tasks
 8 and missions. There's possibly ferrying
 9 VIP's.

10 ROIL, Q.C.:

11 Q. One of the things we know about this
 12 particular company is that it has
 13 responsibilities to provide some search and
 14 rescue efforts, and in fact did on March 12th.
 15 This would be picked up in this area?

16 MS. TURNER:

17 Q. Absolutely. That search and rescue activity
 18 profile could be considered if we choose to
 19 extend to the boundaries. So we have a lot of
 20 choice as to where we put the boundaries of
 21 this assessment, and I look forward to
 22 actually mapping out some of the activity
 23 profiles, you know, with the aviation
 24 companies and the operators themselves to
 25 really look at those things that we want

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1 included into this. Now just going back to
 2 the context, you can see why you spend 40
 3 percent of your time in that definition piece
 4 up front because we need to actually (1) scope
 5 out these various things, make some decisions
 6 about whether they're in, they're out. If
 7 they're in, great, we didn't need to look at
 8 the appropriate data sources to get a good
 9 level of integrity. If they're out, no
 10 problems, we just need to list it as an
 11 exclusion or as a limitation so that when
 12 people read the profile itself, or when the
 13 profile is used it's actually read within the
 14 context of where the boundaries have been
 15 placed. The next one here is the operator
 16 profile, and this really goes into the
 17 aviation companies that provide support to
 18 this industry itself. So in the case of the
 19 helicopter medical profile that we've recently
 20 undertaken in the United States, the operator
 21 profile actually went into the various
 22 business models from companies that were
 23 listed on the stock exchange all the way
 24 through to not-for-profit charity
 25 organizations that owned and operated the

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1 aircraft. It actually goes into the crew
 2 profile. It goes into those other
 3 organizational factors I mentioned when we
 4 were discussing the swiss cheese, and it's
 5 interesting. There's another 10 sub-sets that
 6 actually break out in that aspect itself.

7 ROIL, Q.C.:

8 Q. Now that word, "operator," we have been using.
 9 For example, the C-N-L-O-P-B uses the word,
 10 "operator," to refer to the oil companies, and
 11 we've been trying to use "helicopter operator"
 12 to refer to the Cougar type of companies, the
 13 helicopter operating companies. What operator
 14 are you targeting here, both or one or the
 15 other?

16 MS. TURNER:

17 Q. Sure. I believe the intent of the definition
 18 probably would be both in this aspect.
 19 Looking at those structures for both the oil
 20 industry and the aviation industry, there
 21 would be some crossover then with the industry
 22 operating environment, and that's just where
 23 we need to get that clarification, and that
 24 will come in the coming weeks as this
 25 definition is developed.

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1 ROIL, Q.C.:

2 Q. Okay, so each of these little pieces of the
 3 circle are not necessarily exclusive of a
 4 relationship with the other.

5 MS. TURNER:

6 Q. No, that's correct, but just on that example,
 7 Mr. Roil, in terms of the operator profile, if
 8 we were looking at the aviation operator or
 9 the helicopter operator, as you say, that's
 10 one aspect. Now the activity profile I would
 11 keep quite narrow into helicopter activities
 12 as opposed to any safety activity that might
 13 occur on an oil rig.

14 ROIL, Q.C.:

15 Q. Yes, we are mandated through our Terms of
 16 Reference to focus on only the helicopter
 17 transport portion.

18 MS. TURNER:

19 Q. With that.

20 ROIL, Q.C.:

21 Q. Yes.

22 MS. TURNER:

23 Q. So you can see how some of these aspects of
 24 the profiling model can be quite taut and
 25 limited as you point out in terms of limited

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1 by the Terms of Reference, or limited by where
 2 we choose to put the definition collectively
 3 where others actually could be quite broad,
 4 and quite diverse. These next three elements
 5 of the risk profiling model are key to and at
 6 the heart of the industry structure and
 7 oversight model. The terms that I use here
 8 are quite common terms from an aviation
 9 regulatory oversight perspective, and I'm sure
 10 they have a similar meaning in terms of
 11 oversight of the broader oil industry itself.
 12 I might just jump back to the oversight model.
 13 Oversight is all about providing a sound level
 14 of governance that directs and controls the
 15 organizations that fall within that sector.
 16 So in terms of the oversight, that would
 17 really come into--you mentioned before about
 18 the petroleum board and aviation regulator,
 19 and the regime that they have in place to
 20 monitor, conduct surveillance of the
 21 organizations, and check that the prescribed
 22 standards are actually being met or are being
 23 exceeded.
 24 ROIL, Q.C.:
 25 Q. So that's the oversight piece.

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1 MS. TURNER:
 2 Q. That's correct.
 3 ROIL, Q.C.:
 4 Q. The oversight of this activity that we are
 5 examining.
 6 MS. TURNER:
 7 Q. That's right. We could actually replace the
 8 word, "oversight," and call it "governance"
 9 and--however, why we've called it oversight is
 10 this next area of compliance and the next of
 11 assurance are very closely linked with
 12 governance. So just moving to the compliance
 13 regime, what we would examine in that phase of
 14 the industry risk profile is what is the
 15 legislative hierarchy? What is the regulatory
 16 hierarchy? What standards are the industry
 17 subject to? What are the better practice
 18 standards that are out there that many
 19 subscribe to, and then moving then--that
 20 connects quite nicely then into the operator
 21 profile where it then gets into the
 22 organizations, structures, policies, and
 23 procedures. So from a compliance perspective,
 24 the reason why this is in the industry risk
 25 profile is because that really provides that

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1 foundation and the base of the boundaries.
 2 However, the industry risk profile is not
 3 purely looking at the risk of non-compliance.
 4 We want to take it beyond compliance and
 5 looking at the whole regime, but that provides
 6 us a very solid and firm foundation to build
 7 upon. This last aspect on the industry risk
 8 profiling model is really looking at the
 9 assurance aspects, so the question is what is
 10 assurance? From my perspective, assurance is
 11 all about how do you receive or provide
 12 confidence that things are working the way
 13 they should? How do you know? Now I would
 14 probably do upwards of 40 presentations to
 15 boards of directors of various companies
 16 around the world both inside and outside the
 17 aviation industry a year. The one question I
 18 get asked about 80 percent of the time is,
 19 "Kimberley, this is all really nice material,
 20 but how do we know we're safe?" "How do we
 21 know we're safe? We think we're safe. We
 22 check. We're monitoring, but what assurance
 23 can you provide me?" "What guarantee can you
 24 provide me that we are free from harm," and
 25 it's actually quite a difficult question

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1 because going back to our opening--we talked
 2 about the aviation industry. Risk is
 3 inherent. To have a freedom of any type of
 4 harm would actually impede the use of aviation
 5 ethics, and so really what we're about in this
 6 assurance model is providing the right
 7 structures to provide the right level of
 8 checking to the right place at the right time,
 9 and so the assurance regime could be done in a
 10 number of levels, and Assurance Level I is
 11 where we might take someone's word for it, and
 12 someone will provide an undertaking or an
 13 assurance statement to say, "I'll give you my
 14 word as the CEO that we are compliant," or
 15 that "We are managing that risk," and I say,
 16 "Thank you very much, that's excellent."
 17 "That's what we contract you for." "That's
 18 why we pay you the money, and we have
 19 confidence that your word is as it is," and
 20 Assurance Level II is where that assurance
 21 statement would be provided, but some
 22 additional evidence would go along with it, so
 23 that might be some paperwork. It might be an
 24 audit report. It might be some facts and
 25 figures. It might be some performance

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1 measures that actually go with the assurance
 2 statement to provide extra information to say,
 3 "Here's my proof as to what gives me the right
 4 to state that you should be confident." Okay,
 5 then in Assurance Level III, basically it
 6 supersedes all of that, and a third party or
 7 the organization who wants the assurance would
 8 physically go and check themselves, and that's
 9 really where we start getting into auditing,
 10 and we start getting into physical
 11 inspections. We start getting into third
 12 party auditors to do that checking, so with
 13 the assurance model it's all about looking at
 14 that full regime of checking and what level of
 15 confidence needs to be provided to whom.

16 ROIL, Q.C.:

17 Q. Okay, so the whole issue of who should audit
 18 and when would audits be done and how many
 19 audits or how many inspections, that would fit
 20 within this assurance piece?

21 MS. TURNER:

22 A. Yes, it would; yes, it would. So that
 23 summarizes the industry risk profiling models,
 24 so you can see that it is a lot broader than
 25 just looking at the safety component, however,

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1 the safety component itself is put into the
 2 risk profile. We use this profile in two
 3 different ways. Firstly, we use it to assist
 4 in guiding us in information collection. So
 5 as we were just discussing your examples
 6 around the assurance regime, absolutely that
 7 would give us the trigger to go and look at
 8 those things. Secondly, once information is
 9 collected, this industry risk profiling model
 10 gives us a really good way to sort out and
 11 classify the information into group and theme
 12 because generally people are wanting to know,
 13 well, what are the issues with the aircraft,
 14 what are the issues with the operator, what
 15 are the regulatory or compliance issues, what
 16 are the issues of the industry, what are the
 17 safety issues, and so it really does give us a
 18 good classification to them present the
 19 information.

20 ROIL, Q.C.:

21 Q. So I take it the fact that this is a circle is
 22 not an accident, it is meant to be a
 23 comprehensive look at the entire, at every
 24 angle that you can possibly look at this
 25 industry and this activity?

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1 MS. TURNER:

2 A. Yes, it is, and then just making that linkage
 3 back to the swiss cheese model. As I
 4 mentioned, we start at that industry structure
 5 and oversight level. We'll touch on the
 6 organizational, and then we'll - sorry, we'll
 7 explore the organizational right across those
 8 groups that are involved in the industry, and
 9 then we'll touch on the operational, so you
 10 can see that reflected in this diagram.

11 ROIL, Q.C.:

12 Q. Thank you. Now you're going to tell us a
 13 little bit more about the methodology?

14 MS. TURNER:

15 A. Yes, thank you. So just to summarize the
 16 methodology, we use the risk management
 17 process as outlined in the international
 18 standard. That actually helps us establish
 19 the context, identify the risk, quantify and
 20 then look at the treatment strategies, but
 21 then we use that last diagram, the industry
 22 risk profiling model you just saw, to actually
 23 organize the information. So that industry
 24 risk profiling models that you just saw is not
 25 a process for risk management, it's a

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1 structure used to organize the information for
 2 presentation. I've said here that the
 3 industry risk profiling methodology is driven
 4 on the accumulation of information. If we're
 5 going to design and develop an industry risk
 6 profile that has the opportunity to really
 7 inform how the industry may be governed, or
 8 the tool can be used to conduct a check
 9 against how the industry is currently
 10 governed, you really need to make sure that
 11 the information presented is derived from a
 12 place of a high level of integrity. It can't
 13 just be my personal opinion.

14 ROIL, Q.C.:

15 Q. I was going to say, I take it, that this is
 16 meant to ensure that we park all our
 17 preconceived notions at the door.

18 MS. TURNER:

19 A. Absolutely, and --

20 ROIL, Q.C.:

21 Q. I take it, we also need to be very sure we get
 22 the right information to put in?

23 MS. TURNER:

24 A. Absolutely, because if you don't use the right
 25 input sources, your profile will be flawed,

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1 and that's really where the scientific part of
 2 the process comes into play, and certainly my
 3 role and our team's role in this process will
 4 be to ensure that we're using the right number
 5 of risk identification methods, that we're
 6 getting the right level of depth, that the
 7 information accumulated is broad enough to
 8 then derive these issues, and it's
 9 interesting, I have found in my 14 years of
 10 working in this field that the risk management
 11 process does actually overcome emotion and
 12 bias and opinion if it's used correctly. It's
 13 a very, very powerful tool when you do have a
 14 data driven approach that is not specifically
 15 quantitative in nature, but is being derived
 16 from a good source.

17 ROIL, Q.C.:

18 Q. You used the expression "data driven". I take
 19 it, though, from what you've said earlier,
 20 it's not about number crunching?

21 MS. TURNER:

22 A. No, and when I refer to data, I probably
 23 should correct myself and say more
 24 "information", and I guess what we do with
 25 that information is we extract risk issues out

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1 of it and then we will end up with a list of
 2 risk issues in the case of the helicopter
 3 medical risk profile in the USA. I think
 4 there was over 1260 pieces of risk
 5 information, and then once you have that, you
 6 basically combine it, theme it, group it, and
 7 then you start to see those things emerge. So
 8 how do we theme and group it; that's where
 9 that industry profiling model comes in. So we
 10 tag each piece of information against that
 11 structure, and then, say, in the passenger and
 12 participant profile, there might be 100
 13 different bits of information that are all
 14 sitting in that, and then we can examine and
 15 start to really crystallize the issues that
 16 are of importance.

17 ROIL, Q.C.:

18 Q. So I take it there's two -- there's two
 19 issues. One is to develop the issues to get
 20 the right issues to look at.

21 MS. TURNER:

22 A. Uh-hm.

23 ROIL, Q.C.:

24 Q. And then to prioritize them?

25 MS. TURNER:

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1 A. That's right, and both the prioritization and
 2 the identification is actually sourced from
 3 that information. I know this may sound a bit
 4 theoretical, however, when you're presenting
 5 an industry with a profile that has the
 6 potential to influence and change the way an
 7 industry is governed, you need to be very,
 8 very sure that what you're putting up is
 9 correct, it has a high level of integrity, and
 10 it's not pure opinion, and that's why we
 11 actually dig deep and that's why we actually
 12 use as many information sources as we possibly
 13 can. So I have mentioned here that for an
 14 industry risk profile we would use 12
 15 different risk identification techniques, and
 16 so one of those ID techniques would be to read
 17 through the transcripts of this phase of the
 18 Inquiry, have a look at the issues that might
 19 be discussed or presented, and that may just
 20 be one risk ID technique. Another risk
 21 identification technique might be sitting down
 22 and talking with all the stakeholders and
 23 having some time one on one to really just
 24 discuss where is the industry at, where is the
 25 industry going, what do you see some of the

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1 key areas of growth and change, what do you
 2 see some of the key areas of concern, and
 3 those interviews, we might meet with, say, 50
 4 people, that would be considered one risk
 5 identification method. So you can see that we
 6 do really try and get the depth in that
 7 because of the importance of developing an
 8 accurate profile. So that's a little bit of a
 9 summary of the methodology itself. The reason
 10 why I spend the time to really explain the
 11 methodology is two reasons. Firstly, is to
 12 demonstrate that there is a level of rigor and
 13 science behind how these are derived, and when
 14 the information is presented, different people
 15 read it in different ways depending on their
 16 perspective, and so it's very, very important
 17 that there is strength in how that work is put
 18 forward. The second is, I acknowledge that
 19 there's a lot of individuals and professionals
 20 within the stakeholder groups that are very
 21 skilled in the field of safety and in risk,
 22 and bring some excellent insight to the table,
 23 and there is a different language set that is
 24 used at the industry risk profiling level. I
 25 may use the same terms, but they may have a

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1 slightly different meaning in the safety
 2 context or at the organizational level, and so
 3 that's why I like taking the time to explain
 4 this methodology in this setting.
 5 ROIL, Q.C.:
 6 Q. Okay. So what happens when we do all of this
 7 and we get some information and it comes out
 8 the other end?
 9 MS. TURNER:
 10 A. That's it. I guess, in terms of what is
 11 produced, an industry risk profile is
 12 generally a document. It's split up into
 13 three or four different components. The first
 14 is actually explaining the context, and so
 15 there is a write up so that there is
 16 clarification as to exactly the boundaries of
 17 the industry risk profile itself. The second
 18 part, we do put a brief synopsis of the
 19 methodology and the facts and figures of, you
 20 know, the data sources, who we talked with,
 21 what process was followed, et cetera. The
 22 third part of the industry risk profiling
 23 document is the summation of results of the
 24 summary of results. Because different people
 25 read risk information in different ways, we

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1 opt at the industry level to present the
 2 information in three different ways. We
 3 firstly produced the risk information in a
 4 list from highest risk to lowest. Now just to
 5 put some perspective on this, I have never
 6 done an industry risk profile in the last four
 7 or five years that has more than 26 risk
 8 issues.
 9 ROIL, Q.C.:
 10 Q. So although there might be 100 factual issues,
 11 they come down to risk issues that are
 12 narrower, do they?
 13 MS. TURNER:
 14 A. That's right, and I put that forward because
 15 those organizations that have, say, a
 16 corporate risk register or safety risk
 17 registers may have 50, 60, 100, 300 items in
 18 that register, and industry risk profile
 19 really looks at those high level systemic
 20 issues that have the potential to impact on
 21 the industry itself in a negative way. So
 22 this list of risks, we present them firstly by
 23 ranking, highest risk to lowest. That
 24 actually provides a great aspect of priority,
 25 so that as the solutions and the resources are

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1 being considered in terms of what's required
 2 to reduce the risk, it gives us a prioritized
 3 list as to where to put our focus first. The
 4 drawback with presenting the information in
 5 that fashion is we could remove any risk
 6 rating, and say there might be 12 industry
 7 risks that are on this profile, they're all
 8 important and they all need to be addressed.
 9 So sometimes by producing this list in a
 10 ranking order, it can give a false sensation
 11 that will only focus on the number one risk,
 12 when really all of those aspects brought up on
 13 a risk profile should be drawn to the
 14 attention and worked through with the
 15 industry. The second way that we produce the
 16 results is in this tabulated format or against
 17 a risk matrix. When you measure and quantify
 18 risk, you do that by looking at the potential
 19 consequence of the risk, what will happen if
 20 it happens, and the likelihood of how likely
 21 it is that it would occur, and so then you can
 22 actually plot that on this risk matrix, and
 23 I'm sure many of you are very familiar with
 24 this process, particularly those who have a
 25 safety or risk management background.

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1 ROIL, Q.C.:
 2 Q. I'm not sure if those who are listening to us
 3 outside the room can see it, but essentially
 4 it's a chart like a checkerboard.
 5 MS. TURNER:
 6 A. Yes.
 7 ROIL, Q.C.:
 8 Q. With a whole bunch of little pills or little
 9 white spots all up on one side.
 10 MS. TURNER:
 11 A. That's right.
 12 ROIL, Q.C.:
 13 Q. Okay, and what's that telling us in sort of a
 14 snapshot?
 15 MS. TURNER:
 16 A. Okay, so you can see with this example that
 17 I've put forward that all those little pills
 18 or white dots on the checkerboard are actually
 19 where the actual risks themselves fall. So
 20 you can see in that red category we have eight
 21 different risks in that very high basket, and
 22 then there's a scattering of risks in that
 23 next tier down.
 24 ROIL, Q.C.:
 25 Q. So if a risk has a extreme consequence and

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1 it's almost certain to happen --

2 MS. TURNER:

3 A. It will fall in that top quadrant.

4 ROIL, Q.C.:

5 Q. Okay, and that is where you put your first

6 attention?

7 MS. TURNER:

8 A. Yes.

9 ROIL, Q.C.:

10 Q. If there's anything in there --

11 MS. TURNER:

12 A. That's right, and --

13 ROIL, Q.C.:

14 Q. That's your most important?

15 MS. TURNER:

16 A. Absolutely, and I have this theory that I talk

17 about, it's called the elephants and the

18 mosquitoes, and I know you have both of those

19 up here in St. John's. It's a joke.

20 ROIL, Q.C.:

21 Q. We have the mosquitoes.

22 MS. TURNER:

23 A. Yeah, I know, maybe not the elephants. Now

24 why I talk about this is because this matrix,

25 this risk matrix, is actually really valuable

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1 in putting the mosquitoes and the elephants on

2 the same scale. Now why I say that is what's

3 the chance that you might be killed by an

4 elephant stampede. Well, it depends on the

5 context of whether or not you're in St. John's

6 or Sydney, Australia, or in Africa on a

7 wildlife tour, but we would think about being

8 killed by an elephant as being absolutely

9 catastrophic and generally our attention could

10 all be drawn to preventing that from

11 happening, but really what's the likelihood of

12 that happening. It's probably unlikely, down

13 the bottom end of the scale, but if it does,

14 where does it sit on the consequence scale.

15 Well, it depends. If it's my life, I'd

16 certainly put it in the extreme category. So

17 if we were to look at extreme and unlikely, it

18 still actually fits up there in that high

19 basket. Now when I talk about mosquitoes, if

20 we look at how many people around the globe

21 die of airborne diseases that are carried by

22 mosquitoes, it's probably not one, two, or

23 three people, it's hundreds of thousands of

24 people, but there's a low consequence or a low

25 event mosquito bite. The likelihood is

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1 probably quite significant, and so where does

2 that actually rank and compare against the

3 elephant example, and so what we're actually

4 looking at from a technical perspective, low

5 likelihood, high consequence; high likelihood,

6 low consequence events, the opposite, and

7 putting them on the one scale. So this tool

8 really does help us rank and compare those.

9 In an aviation context, the risk of a crash,

10 the risk of the loss of life in helicopters,

11 very improbable, but it does occur. Events of

12 misfortune or mishap or lower level risk that

13 may not result in the loss of life or an

14 airframe, that may be many of them. Now that

15 is one of the reasons why in the aviation

16 industry globally, and this has really been

17 the case for the last, say, 30 years, there

18 was a really significant accident in Tenerife

19 where two jumbo jets basically collided before

20 they even took off, you know, on the runway.

21 That was a real turning point for aviation, to

22 really look at these failures and the

23 breakdown, the mishaps and these issues that

24 can go wrong, and you can pinpoint the change

25 in aviation safety practice right back to that

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1 event, and so the aviation world is very

2 deliberate and considerate in picking up the

3 mosquitoes, in being aware of them, reporting

4 them, analysing them, trending them, because

5 there's this concept, and I know you'll

6 understand and appreciate this one, the

7 iceberg model - maybe that was invented up

8 here in St. John's, where, you know, what we

9 see above the waterline is that tip of the

10 iceberg, might be that catastrophic event or

11 that loss of an aircraft, but if you

12 understand the depth of what's under the

13 water, that's actually where we start looking

14 at the occurrences, the near misses, and the

15 potential mishaps. When we start looking at

16 that ratio, it's quite known in that iceberg

17 model in the aviation industry that to every

18 catastrophic aircraft loss, there can be up to

19 a thousand incidents, 10,000 near misses or

20 potential mishaps. So the aviation industry

21 is committed globally to identifying those

22 occurrences, those near misses, those events,

23 in order to position themselves to really

24 prevent that broader mishap. So getting back

25 to this risk matrix, this gives us the

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1 opportunity to present the results, so that's
 2 the before snapshot. You can always reduce
 3 and manage risk. It just comes down to at
 4 what cost and at what level of effort that is
 5 required to actually implement those risk
 6 reduction measures, and so this is actually
 7 post treatment of, in this example, where this
 8 risk profile could be shifted, and then you
 9 can actually tag an activity task list and
 10 resource that appropriately to achieve this
 11 shift in profile. So that's the second way in
 12 how we present the results.

13 ROIL, Q.C.:

14 Q. So here we're showing how the risks that can
 15 be high and more likely, can be moved to being
 16 lower and less likely?

17 MS. TURNER:

18 A. Yes, that's correct.

19 ROIL, Q.C.:

20 Q. By the steps that we would take?

21 MS. TURNER:

22 A. That's correct. So the industry risk profile
 23 document will have this type of representation
 24 of the information. The additional piece
 25 would be each one of those dots or those pills

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1 would actually be labelled with the risk
 2 number, so you'd know exactly what that issue
 3 is, and you can actually track what's it going
 4 to take to take it from high to low. So it's
 5 a very good tool and you can see how it's not
 6 purely just an assessment, but it really is
 7 about action, it's about the management of
 8 risk, it's not just about acknowledging what
 9 the risks are. The third way that we present
 10 the results in the risk profiling document is
 11 actually we list the risk information against
 12 the industry risk profiling model. So we
 13 talked about oversight, we talked about
 14 compliance, assurance, we talked about the
 15 operator profile, activity profile, aircraft
 16 profile, industry operating environment, the
 17 passenger and participant profile, systems
 18 profile, safety profile. So we actually
 19 position the number of risks or the risk
 20 information back against that model, and
 21 that's predominantly used to then track and
 22 monitor at an industry level as to what occurs
 23 with the follow-up actions.

24 ROIL, Q.C.:

25 Q. So this is to take steps forward to see that

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1 these risks that have been identified are
 2 ameliorated by some way?

3 MS. TURNER:

4 A. That's right, and appropriately managed, and
 5 what you find is when you actually use the
 6 risk profile, I mean, it's a fantastic tool
 7 to, I guess, support and inform the Inquiry
 8 process, yet the risk profiles can actually be
 9 used in many different ways. It can be used
 10 by the operators themselves, and I use that two-
 11 fold; the oil companies, or the helicopter
 12 companies. It can be used by regulatory
 13 bodies and agencies to track and monitor the
 14 shift in the profile. It can be used by
 15 manufacturers to understand the operating
 16 environment and the challenges that are faced
 17 by the industry that they wish to service. So
 18 it is a very useful tool, and for the purposes
 19 of the Inquiry, this rationale and this
 20 concept has been chosen to really complement
 21 the Terms of Reference and to sit alongside
 22 the other activities that are taking place by
 23 the TSB. I just mentioned the output and the
 24 use of the IRP, and I've just got a couple of
 25 points here that, at the Commissioner's

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1 request, the industry risk profile will be
 2 developed concurrently with the Inquiry
 3 process, and we talked this morning about
 4 aligning how the profiles developed with the
 5 various phases, and towards the end of my
 6 presentation I do have just a chart which
 7 actually aligns those quite nicely. The key
 8 thing here is with the industry risk profile,
 9 it really does need to be a collaborative
 10 arrangement, and certainly with our
 11 involvement and working as an integrated
 12 member of part of the Inquiry team, the key
 13 really is that input from the stakeholders,
 14 and all stakeholders. It's really interesting
 15 in compiling these, to get the input from a
 16 variety of sources, you can then be confident
 17 that you've actually had complete coverage of
 18 the issues itself. In terms of its immediate
 19 use, in terms of the risk profile, we
 20 anticipate that the content of the IRP will be
 21 presented for consideration by the
 22 Commissioner and used in the various
 23 deliberations that will occur throughout the
 24 Inquiry. So I look forward to compiling this
 25 and it certainly is a rigorous justified

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1 structured process that really does provide a
 2 good picture.
 3 ROIL, Q.C.:
 4 Q. Okay, now I take it that we have come to sort
 5 of a turning point in your presentation, that
 6 there's -- just explain sort of the two parts.
 7 The first part we've dealt with, and the part
 8 that we're going into?
 9 MS. TURNER:
 10 A. Sure. What I wanted to do first up this
 11 morning was just really frame up and put in
 12 context what is risk management, why has it
 13 been opted to be used as an underpinning
 14 methodology to the Inquiry, and thirdly, what
 15 is the industry risk profiling process and how
 16 could that add value and contribute to the
 17 considerations for the Inquiry itself. So
 18 that first bracket really focused around risk
 19 management, and I must say certainly in all of
 20 my travels around the globe, I am so
 21 encouraged that an Inquiry of this nature
 22 would opt to use this underpinning philosophy
 23 of proactive risk management. It's really
 24 great to see. The second bracket of the
 25 material or the presentation really starts to

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1 examine some of those related, yet very
 2 important disciplines, such as safety
 3 management systems, corporate governance and
 4 contractor management, and I've got some
 5 concepts that I wanted to put forward just so
 6 that we can understand the relationship
 7 between that and this risk based approach.
 8 ROIL, Q.C.:
 9 Q. Okay, I'll stop you there. Commissioner,
 10 because I think we've come to a stage where we
 11 could do this one of two different ways, and I
 12 seek your direction, and perhaps from my
 13 colleagues and others in the room, as to
 14 whether this might be an opportunity where
 15 some questions could be given to Ms. Turner
 16 that she could -- if there are questions
 17 arising out of this, and then questions after
 18 the second phase, or the second part of her
 19 presentation, or whether the room would rather
 20 that we went all the way through it and then
 21 had the questions at the very end.
 22 COMMISSIONER:
 23 Q. Thank you, Mr. Roil. Thank you, Ms. Turner.
 24 Let me ask our views, would anybody like to
 25 ask questions on what has already transpired

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1 and been given by Ms. Turner, or would you
 2 prefer to wait until her presentation is
 3 complete? Let me have your thoughts, if you
 4 would.
 5 ROIL, Q.C.:
 6 Q. They are a quiet lot.
 7 COMMISSIONER:
 8 Q. What do you think? There's plenty of very
 9 senior people out there. What do you think?
 10 Would you prefer to wait until it's over.
 11 WHALEN, Q.C.:
 12 Q. I certainly would, yes.
 13 COMMISSIONER:
 14 Q. Mr. Earle, what about you?
 15 EARLE, Q.C.:
 16 Q. Yes.
 17 COMMISSIONER:
 18 Q. Ms. Strickland?
 19 MS. STRICKLAND:
 20 Q. I agree.
 21 COMMISSIONER:
 22 Q. It seems to be a consensus then that people
 23 would probably wait. One thing I would say,
 24 you know, about questioning, and it harks
 25 back, I guess, to my opening remarks when the

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1 Inquiry began its public hearings, I see it,
 2 and -- I saw it then, and I still see it as a
 3 collaborative process in which everyone has an
 4 opportunity for input. So if, for example, in
 5 questioning, let's say Mr. "x" or Ms. "x" has
 6 a turn first on the list or second, and other
 7 material is brought out as a result of other
 8 questions, my view is that nobody should leave
 9 the sessions without feeling that they had an
 10 opportunity to explore any issues no matter
 11 when brought up. So I will not hold anybody
 12 to the position of, well, look, you had your
 13 time of questioning and you can't ask again a
 14 question. I don't want to see it work that
 15 way. I want to see that collaborative
 16 approach in which everybody gets an
 17 opportunity to ask anything which they feel
 18 may be relevant and worthwhile. So I just say
 19 that now so that in case people don't feel
 20 that if I don't get everything in in my first
 21 few questions, I won't be allowed to re-ask or
 22 explore or seek clarification. So I would
 23 just say that now so there's no doubt in
 24 anyone's mind. What would you like to do, Mr.
 25 Roil? It's about 5 past 12.

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<p>1 ROIL, Q.C.:</p> <p>2 Q. Should we continue on now or we can take the</p> <p>3 break at a different time? It's entirely up</p> <p>4 to -</p> <p>5 COMMISSIONER:</p> <p>6 Q. Perhaps we could go--are you able to go on now</p> <p>7 or would you -</p> <p>8 MS. TURNER:</p> <p>9 A. How are we going for time? We've got -</p> <p>10 ROIL, Q.C.:</p> <p>11 Q. Another 25 minutes normally.</p> <p>12 MS. TURNER:</p> <p>13 A. Okay. Well, we'll keep going through this</p> <p>14 next bracket.</p> <p>15 ROIL, Q.C.:</p> <p>16 Q. Until we come to another -</p> <p>17 MS. TURNER:</p> <p>18 A. That sounds -</p> <p>19 ROIL, Q.C.:</p> <p>20 Q. - a natural turning point.</p> <p>21 COMMISSIONER:</p> <p>22 Q. All right.</p> <p>23 MS. TURNER:</p> <p>24 A. Yeah, that sounds good.</p> <p>25 ROIL, Q.C.:</p>	<p>1 So corporate governance is a distinct</p> <p>2 discipline. Risk management is a distinct</p> <p>3 discipline. Safety and safety management</p> <p>4 systems, as we heard from Transport Canada and</p> <p>5 the TSB, referred to a lot as the emerging way</p> <p>6 of where their regulatory approach was going,</p> <p>7 and then finally our contract management.</p> <p>8 Now contract management has been selected</p> <p>9 because we've got these two regimes that come</p> <p>10 together. The aviation provider is contracted</p> <p>11 to provide a service to a broader industry and</p> <p>12 this contract management aspect is actually</p> <p>13 really actually very key but you're not the</p> <p>14 only industry that actually has this set up.</p> <p>15 The mining industry contracts aviation</p> <p>16 services to move diamond mine drills and</p> <p>17 things like that up in the northern</p> <p>18 territories, up there are Diavik Mines. The</p> <p>19 firefighting industry contracts aviation</p> <p>20 services to fight fires in the fire season and</p> <p>21 we see that over, right throughout Canada and</p> <p>22 right on the west. The medical industry</p> <p>23 contracts aviation services to move critical</p> <p>24 patients that are need of quick, rapid</p> <p>25 response. There's a whole range of different</p>
<p>1 Q. Okay.</p> <p>2 COMMISSIONER:</p> <p>3 Q. All right then.</p> <p>4 MS. TURNER:</p> <p>5 A. That sounds good.</p> <p>6 ROIL, Q.C.:</p> <p>7 Q. Okay. Now you, in your part four as you call</p> <p>8 it, you seem to have sort of some different--</p> <p>9 not different, sorry, some additional</p> <p>10 discussion topics where you're going to</p> <p>11 discuss about this a little bit more.</p> <p>12 MS. TURNER:</p> <p>13 A. Yes, sure. There's four additional discussion</p> <p>14 topics that I wanted to put forward because we</p> <p>15 have actually touched on a very broad range of</p> <p>16 topics from strategic governance at the</p> <p>17 industry level or at the national or</p> <p>18 provincial level, all the way through into</p> <p>19 some of the operational hazards of flying in</p> <p>20 treacherous weather and poor conditions and,</p> <p>21 you know, all of those type of things. So</p> <p>22 that flow is actually quite broad, and I felt</p> <p>23 it would be valuable to then just crystallize</p> <p>24 some of these other related topics that in</p> <p>25 their own right are disciplines themselves.</p>	<p>1 industry groups that contract aviation service</p> <p>2 and these aviation services are generally very</p> <p>3 vital to the operation and without them, power</p> <p>4 line industries don't function, firefighting</p> <p>5 doesn't take place, mines in remote locations</p> <p>6 don't get the equipment and the people that</p> <p>7 they need or in the case of the oil industry,</p> <p>8 our workforce would take a long time to get</p> <p>9 there. So that aspect of contract management</p> <p>10 is quite important and really sets the frame</p> <p>11 nicely for how we will tackle the development</p> <p>12 of the industry risk profile itself.</p> <p>13 ROIL, Q.C.:</p> <p>14 Q. So just to go back to your earliest</p> <p>15 definitions where you said risk is a chance of</p> <p>16 a safety something happening that will impact</p> <p>17 on objectives or the chance of a something</p> <p>18 happening that will impact on safety</p> <p>19 objectives, I take it that contract management</p> <p>20 might be the something that could impact on</p> <p>21 the safety objective?</p> <p>22 MS. TURNER:</p> <p>23 A. Yes.</p> <p>24 ROIL, Q.C.:</p> <p>25 Q. What would be an example of a safety something</p>

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1 that would impact?
 2 MS. TURNER:
 3 A. Sure.
 4 ROIL, Q.C.:
 5 Q. Would that be a person not wearing the
 6 appropriate suit or whatever on the day in
 7 question?
 8 MS. TURNER:
 9 A. Yeah, absolutely. I guess it comes down to
 10 what is our objective. Is our objective safe
 11 flight or is our objective an effective
 12 running and production of oil? And so, you
 13 actually need to look at both, from both
 14 perspectives. Ultimately, both are important.
 15 Now the focus here is of the safety of our
 16 crew in helicopter transportation. The
 17 question is raised, well, why do we need
 18 transportation of staff and workers to the oil
 19 rigs? To achieve that ultimate other aim or
 20 goal. So in terms of your question around
 21 what is the safety something, say an equipment
 22 issue on the aircraft that prevents it from
 23 flying and it's unserviceable would be a
 24 safety something that could impact on the
 25 broader objective. Whereas a broader

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1 objective of selection of the right aircraft
 2 type to be able to undertake the task that
 3 you're after, to provide great appropriate
 4 safety buffers and safety zones could be that
 5 other way around. So you'll see that you
 6 can't divorce these issues, but you can focus
 7 on one particular dimension of risk, in this
 8 case being safety.
 9 ROIL, Q.C.:
 10 Q. Okay. The first one we're going to look at is
 11 governance.
 12 MS. TURNER:
 13 A. Okay. In terms of governance, often referred
 14 to as corporate governance, as I mentioned
 15 this really is an emerging discipline and I'm
 16 very aware that CSOX, or the Canadian
 17 Sarbanes-Oxley Act, really does have fairly
 18 defined requirements for legislating
 19 governance of companies, publicly traded
 20 companies. Those principles can be applied at
 21 all different levels regarded of whether or
 22 not you're a public or private company itself.
 23 But when we look at governance and what it
 24 ultimately is--and I sit on a standards
 25 committee that I mentioned before, an

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1 Australian standards committee for corporate
 2 governance and it's very, very interesting
 3 because when you look at the makeup and the
 4 composition of those in the room, you have, no
 5 offence, all the lawyers that are very, very
 6 driven from a compliance perspective. I see
 7 no offense taken as I look around the room.
 8 You then have the accountants. You have the
 9 auditors, and then you have me, representing
 10 the risk fraternity, and it's really
 11 interesting when you get into debates about
 12 what is governance. The auditors will tell
 13 you that it's--the auditors and the financial
 14 people will tell you it's all about checking.
 15 It's all about checking to find that
 16 discrepancy of where you can catch people out.
 17 Why? Because that implies there's something
 18 wrong, you know, and going into that. Whereas
 19 the legal fraternity is really around "well,
 20 what's required? What do I have to do? What
 21 is the compliance requirement and am I
 22 actually at risk of being non-compliant?" And
 23 so you've got this checking function, you've
 24 got the compliance and then you've got this
 25 risk management, which is like oh, that's all

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1 very important, yes, and it's all a component,
 2 but what are we really trying to do here?
 3 What are the vulnerabilities? What are the
 4 risks that might be present that we need to
 5 provide that assurance?
 6 And so in terms of governance, it really
 7 is about creating a framework for
 8 accountability. It's about creating a
 9 framework for oversight and so when we
 10 actually get into governance, what is it?
 11 Governance is the system by which
 12 organizations are directed and controlled. I
 13 just mentioned the composition of the
 14 standards committee that I work on, but when
 15 we actually look in its purest form,
 16 governance is about compliance. Governance is
 17 about providing an undertaking that the
 18 organization is complying with the laws of the
 19 land and the requirements, be those standards
 20 mandated or practices prescribed for that type
 21 of activity or industry. So compliance is a
 22 key aspect of governance, and one that is very
 23 tangible and one that is very straightforward
 24 to measure. You are either compliant or
 25 you're not. There's no area of grey from a

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1 compliance perspective.
 2 ROIL, Q.C.:
 3 Q. So if we take examples from the industry that
 4 we are looking at, the regulatory regime of
 5 Transport Canada would be a part of the
 6 compliance piece?
 7 MS. TURNER:
 8 A. Yes, it would, and a good example of that is
 9 the air operating certificate that a
 10 helicopter operator is required to have in
 11 order to operate. You either have one or you
 12 don't. If you have one, you're legally able
 13 to operate an aviation company and fly
 14 aircraft. If you don't, you're not legally
 15 able to operate and fly an aircraft. So that
 16 compliance regime is very much set up in an
 17 aviation context by Transport Canada.
 18 The second component of governance is all
 19 around assurance. Now we used to call this
 20 audits and about four years ago, it was
 21 changed to be a little bit broader around
 22 assurance and when I say I'll give you an
 23 assurance, what does that mean? In my
 24 perspective and in my professional opinion, it
 25 comes down to providing a level of confidence,

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1 an undertaking or even a level of certainty or
 2 guarantee that something will occur.
 3 I travel all around the world and we have
 4 offices in five different countries. It's
 5 absolutely impossible for me to be in five
 6 locations managing and running an organization
 7 staff, projects, client work, technical
 8 integrity of our work with that diversity. So
 9 how do I, as a CEO, achieve a high level of
 10 assurance that my organization is operating
 11 the way it should be? I can audit, yes. I
 12 can get third party auditors, yes. But you
 13 know what, there's a range of other indicators
 14 that give me confidence or take away my
 15 confidence and one I like to refer to, and
 16 it's very, very simple, is when I ring back to
 17 the various offices, be that in New Zealand or
 18 Australia, I never ring people's direct
 19 extension. I always ring through the
 20 switchboard. Why? Because the person that
 21 answers the phone is a fantastic gauge of the
 22 organization and what's going on back in that
 23 office, and so when I ring up and I say
 24 "hello, it's Kimberly here. How's everything
 25 going over there today?" "Good." Right, so

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1 what's really going on? Whereas, you know, if
 2 I asked that question, you know "how's
 3 everything going today?" "Oh, well, Kimberly,
 4 actually we're having a very challenging day
 5 because of this, this, this and this, but
 6 we're all working together to get this done"
 7 or "guess what? Today, we have just completed
 8 this fantastic deliverable that the project
 9 team has been working on for 12 months and the
 10 client is really, really happy and we've had
 11 the opportunity to really bring a great
 12 influence and change and we're just, you know,
 13 chatting about that at the moment." That
 14 information exchange is an assurance tool,
 15 okay, informally.
 16 So there's this range of different
 17 techniques from an assurance perspective, from
 18 formal checking and auditing, all the way
 19 through to just information exchange, having
 20 insight and checking. So assurance and this
 21 regime, this formal regime of assurance is
 22 very, very critical to demonstrating good
 23 governance.
 24 Now if I never asked the question, our
 25 CFO has this excellent saying and Kirk Morten

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1 phrased this and we use it in our work
 2 everywhere, "you can't expect what you don't
 3 inspect." So you can't expect what you don't
 4 inspect. So if you've got an expectation that
 5 certain standards will be met or certain
 6 consistency of practice, but it's never
 7 checked, now that checking might be formal,
 8 through an audit or it might be informal
 9 through just asking the question, that is all
 10 around how you shape the environment to get
 11 the behaviours that you're after. So that
 12 assurance part is really very, very important.
 13 How do you know that you're safe? How do you
 14 know that risks are known, they're quantified
 15 and they're being appropriately managed?
 16 The third component of corporate
 17 governance is what we've just spent all
 18 morning talking about, which is this proactive
 19 aspect of the management of risk, and so when
 20 we start looking at compliance, assurance and
 21 risk, when we combine those things together,
 22 that is the way of how we direct and control
 23 an organization, and so that risk management
 24 part is the proactive, it's the forward
 25 looking. Now where does the safety management

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<p>1 or where does safety risk fit into it? Well, 2 within the aviation environment and also in 3 the oil and petroleum industries globally, 4 safety is one of our key risks that needs to 5 be managed, because if not, we're not going to 6 be effective in delivering the outcome that 7 we're after.</p> <p>8 So these three things really go towards 9 governance, and there's one other aspect that 10 I haven't mentioned. If you were to combine 11 these three different disciplines, compliance, 12 assurance and risk, but if you encase it 13 within ethics and ethical practice and 14 decision making, then you've ultimately got 15 good governance, and we've seen that with the 16 collapse of various organizations around the 17 world and the recent case in the last few 18 years with the collapse of Enron in the US. 19 Where did that failure and breakdown happen? 20 Where were the holes in the cheese? Were the 21 right people checking the right things? Were 22 the right questions being asked? Was that 23 question of why being asked? Was it a 24 compliance issue? How do you get assurance 25 that you're compliant? How do you get</p>	<p>1 eight or nine years ago now, we actually sat 2 around and we said there's got to be a recipe 3 as to how you can shift culture and this is 4 best that we could come up with.</p> <p>5 Okay, how do you actually achieve an 6 enhancement in your culture? You can create 7 an environment that influences behaviours 8 which will in turn shape a culture. Okay, so 9 I'll just say that again. You can create or 10 design an environment that will influence 11 behaviours that will in turn shape a culture. 12 I'm going to take you back to a great example 13 that you all seem to like about the taxi 14 situation. You can create an environment 15 through process design. We design a receipt. 16 We mandate that in order to get paid, you need 17 to fill in this form. The passenger and the 18 driver both needs to fill in their piece. 19 We've created an environment. So through 20 process design, we've created an environment 21 which does what? Influences behaviour. "Oh, 22 I'm not going to answer my mobile phone. I 23 better make sure my seatbelt's working. I 24 better make sure my tires are adequate." So 25 that design of the environment creates or</p>
<p style="text-align: right;">Page 134</p> <p>1 assurance that you're managing risk? So 2 really looking at that and then encasing it 3 within open, transparent ethical practice, 4 which really then complements the cultural 5 traits that we're after.</p> <p>6 ROIL, Q.C.:</p> <p>7 Q. I was going to come to that word, because we 8 haven't said it for a while, but the concern, 9 I think, that everybody has in this industry 10 that there needs to be a culture of safety, 11 will this governance model give us a piece of 12 that puzzle or is this the puzzle in itself?</p> <p>13 MS. TURNER:</p> <p>14 A. Yeah. I'd just like to focus on culture and 15 give some definition to that. Travelling 16 around presenting at different conferences, it 17 actually frustrates me the level of 18 conversation and presentation around culture. 19 Why? Because everyone uses it as a throwaway 20 term. We're doing this to develop our 21 culture. We're going this to achieve an 22 excellent safety culture. However, not many 23 people can tell you how to get that culture. 24 How do you deliberately achieve a change or a 25 shift in your culture? And so, probably about</p>	<p style="text-align: right;">Page 136</p> <p>1 influences behaviours that if you do that for 2 long enough, it actually becomes the way 3 things are done in that industry or that 4 activity.</p> <p>5 ROIL, Q.C.:</p> <p>6 Q. So it's more than the sum of the two. It is 7 the consequence of the two?</p> <p>8 MS. TURNER:</p> <p>9 A. Yes.</p> <p>10 ROIL, Q.C.:</p> <p>11 Q. It's a separate outcome itself.</p> <p>12 MS. TURNER:</p> <p>13 A. Yes, that would be a good way of summarizing. 14 So in going back to your question about will 15 this have an impact on safety? I believe the 16 answer is yes, absolutely it will have an 17 impact on safety. Why? This is actually 18 creating the organizational environment which 19 will influence behaviours. So what safety 20 behaviours would this influence? Well, from a 21 compliance perspective, we want to make sure 22 that not only are we meeting the rules for the 23 sake of meeting the rules, we're actually 24 meeting the rules because they're there for a 25 reason. They're there for our own protection</p>

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1 and the protection of our people and our
 2 resources. But not just compliance, but if
 3 we're trying to influence behaviours around
 4 appropriate risk taking and appropriate
 5 disclosure of a near miss that may not
 6 actually seem that relevant to everybody else,
 7 but oh, gee, that was pretty close, we want to
 8 create the behaviours and influence the
 9 behaviours where people will provide that
 10 information into the safety system so that
 11 those near misses, those occurrences, those
 12 potential mishaps can be captured, can be
 13 examined before the event in that space.
 14 So the design of the environment is
 15 really quite critical and the purpose of a
 16 safety management system again is actually
 17 design an environment. You create an
 18 environment that requires or influences
 19 particular behaviours which will in turn
 20 become the way it's done on a consistent
 21 basis, which is when you've achieved the
 22 cultural change or shift.

23 ROIL, Q.C.:

24 Q. And I take it that the creating of the
 25 environment is not something that the company

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1 does alone. It has to be with its workers?
 2 It's a holistic sort of approach that
 3 everybody has to be a part of?

4 MS. TURNER:

5 A. Yeah, definitely and when we ask the question
 6 "who is the company?" I guess you've got those
 7 who are the policy sponsors. You've got the
 8 managers and the executives. You've got the
 9 supervisors and then you've got the staff and
 10 the workers and everyone actually has a role
 11 to play in that. When you're bringing about
 12 change, sometimes the best way is to actually
 13 pick the informal leaders who may not be a
 14 supervisor, but you know what, if Joe says
 15 that that's the way that it's done, he knows,
 16 and everybody follows. So there are different
 17 ways of developing that culture and it's going
 18 to be interesting in working with the
 19 organizations to really understand a bit more
 20 about, you know, what makes the culture tick.
 21 Are people happy with the culture? Are they
 22 happy with the level of inquiry of people
 23 asking the question why, you know, in this
 24 high risk environment and this high risk
 25 industry.

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1 ROIL, Q.C.:

2 Q. Commissioner, I think that's perhaps a better
 3 place for us to now stop for our lunchtime
 4 break.

5 COMMISSIONER:

6 Q. Yes, all right then. Thank you. We'll
 7 adjourn until 2:00.

8 (LUNCH BREAK)

9 ROIL, Q.C.:

10 Q. Okay. Good afternoon, Ms. Turner. Before we
 11 broke for lunch, you were speaking about the
 12 governance issues and I think you now wanted
 13 to move into the risk management issues, and I
 14 see that some of your slides here are less
 15 than self explanatory, so perhaps you can lead
 16 us through the next section.

17 MS. TURNER:

18 A. Yes, thank you, Mr. Roil, and before lunch, we
 19 were talking about those four disciplines that
 20 really are related and relevant to the
 21 management of risk in this situation. The
 22 four topics that we were talking about:
 23 corporate governance; the second, risk
 24 management; the third, safety management
 25 systems; and the fourth, contract management

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1 or contract to management. So the bracket
 2 that I'd just like to go through now is really
 3 revisiting risk management but really looking
 4 at the relationship with those couple of
 5 different areas.

6 I'll talk from an aviation perspective.
 7 Within the aviation industry and an aviation
 8 organization as such, there's different layers
 9 that require the management of risk and so
 10 this diagram, and for those of you that can't
 11 see the image that I have put forward, there's
 12 three levels or three tiers that we're looking
 13 at. First is the governance area, which is
 14 really that high level umbrella structure and
 15 framework that is there to direct and control
 16 the organizations. The second piece here is
 17 really looking at key areas of change or
 18 growth. For example, the types of change that
 19 happen in the aviation industry are the
 20 replacement of an aircraft or the change of an
 21 aircraft type, possibly opening a new base or
 22 location, possibly taking on a new contract or
 23 a new client, or even maybe a change in
 24 technology, the introduction of night vision
 25 goggles, for example, or various changes that

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<p>1 take place. It may even be just an 2 organizational restructure or possibly even an 3 economic downturn or upturn in the market that 4 changes the operation or the nature of the 5 business itself.</p> <p>6 ROIL, Q.C.:</p> <p>7 Q. So the change itself has to be managed?</p> <p>8 MS. TURNER:</p> <p>9 A. Absolutely, and what we find is if that change 10 itself is not managed, it has a strong 11 possibility of inducing those operational 12 risks that we talked about this morning.</p> <p>13 Then the third level is really looking at 14 the operational application of this process 15 and I highlighted earlier about the importance 16 of that safety risk dimension in the high 17 reliability organizations, such as aviation 18 industry, the petrochemical industry, the 19 nuclear industry, et cetera, and so the safety 20 management system is another key part. Now if 21 we look at all three of these areas, on this 22 next slide you'll see that risk management or 23 the risk management process is a component of 24 each of these layers. From a governance 25 perspective, we talked earlier about</p>	<p>1 operational staff and crew who are out there 2 doing the job every day and actually 3 undertaking the flights or the tasks or the 4 activities them self.</p> <p>5 ROIL, Q.C.:</p> <p>6 Q. So sometimes we hear the expression integrated 7 risk management. Is that what this is all 8 about?</p> <p>9 MS. TURNER:</p> <p>10 A. Integrated risk management or integrating risk 11 management practices would be a great title 12 for this concept and many people refer to 13 integrated risk management, but they're often 14 referring to integrating safety risk, 15 financial risk, reputation risk, legal risk, 16 environmental risk, for example. Now those 17 would be components of an enterprise risk 18 management framework, sitting within that 19 governance regime.</p> <p>20 ROIL, Q.C.:</p> <p>21 Q. Okay.</p> <p>22 MS. TURNER:</p> <p>23 A. So that concept of integrating risk management 24 or using the risk management process as the 25 string that ties everything together is really</p>
<p>Page 142</p> <p>1 compliance, assurance and the management of 2 risk. From a change perspective, well, an 3 organization would only embark upon that new 4 venture or that new endeavour in order to 5 maximize some outcome or an improvement, and 6 so we have the application of risk management 7 for those new ventures or the change risk 8 management process, and then one of the 9 elements of a safety management system is the 10 operational risk management, and so at each 11 one of these levels, we actually have risk 12 management practices.</p> <p>13 So in looking at this whole set up or the 14 structure for an organization, we really can 15 integrate these three different disciplines of 16 governance, change management and safety 17 management system through risk management, and 18 why this is important is if you can train your 19 organization and your people are familiar with 20 the application of the risk management 21 process, it can be applied at any one of those 22 levels, at the enterprise risk level with the 23 corporate executives and maybe the board of 24 directors, for project teams or key staff who 25 are leading a change process, or the</p>	<p>Page 144</p> <p>1 key to this whole approach.</p> <p>2 The next aspect that I wanted to walk 3 through is now really delving into the safety 4 risk component of helicopter transportation 5 and in particular, the application of SMS 6 within the aviation industry. We heard last 7 week from Transport Canada and they outlined 8 that there is a move and a shift both within 9 Canada and further abroad for aviation 10 regulations to be risk based. So what does 11 that really mean? In the past, the aviation 12 industry globally has had a very prescriptive 13 approach to regulation. So the rules and the 14 regulations have been extremely explicit and 15 specific for different components of the 16 industry.</p> <p>17 ROIL, Q.C.:</p> <p>18 Q. In other words, I take it, you shall use this 19 or you shall do that?</p> <p>20 MS. TURNER:</p> <p>21 A. You shall use this piece of equipment. You 22 shall use that process. You shall use this 23 checklist, et cetera. Yet what we're seeing 24 with this shift towards risk based oversight 25 is not necessarily the regulator being</p>

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1 prescriptive about the activity or the
 2 procedure that needs to take place, but rather
 3 taking one step back and providing guidance
 4 that the organization should have a process in
 5 which they should manage, design or improve
 6 their own procedure. So it's really moving to
 7 a process based thinking, and many of you with
 8 a safety background would be very familiar
 9 with systems thinking and it's all about
 10 process based application of this area.
 11 One of the goals of moving to
 12 organizations having a safety management
 13 system is that they can be responsive to the
 14 changes in the risk profile and adapt their
 15 procedures and their set up in order to cater
 16 for that change. So rather than wait for
 17 compliance based rule to come out to cater for
 18 that change in environment, context or
 19 technology -
 20 ROIL, Q.C.:
 21 Q. So to go back to our little analogy, instead
 22 of having to wait for the "thou shall do this"
 23 to a change of now instead of that, thou shall
 24 do something else, okay, what happens under
 25 the process based application?

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1 MS. TURNER:
 2 A. The process based application then requires
 3 aviation organizations to have the structures
 4 and the process in place so that their people
 5 can apply that way of thinking and that way of
 6 planning to each situation. So the regulator
 7 is shifting more towards checking process
 8 rather than checking specific practices.
 9 ROIL, Q.C.:
 10 Q. And is that just in Canada or is that a
 11 worldwide trend?
 12 MS. TURNER:
 13 A. This is actually a worldwide move that has
 14 been afoot for at least the last six or seven
 15 years, and I'd just like to explain the
 16 hierarchy in the aviation industry. The most
 17 senior organizational regulatory body is a
 18 global organization called the International
 19 Civil Aviation Organization or ICAO. Now
 20 various countries or member states, as they're
 21 referred to, subscribe to the conventions of
 22 ICAO and the various acts that are in place at
 23 an international level. So ICAO actually sets
 24 the rules for the regulator, such as Transport
 25 Canada, the FAA in the US or the Civil

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1 Aviation Authority in the UK, for example. So
 2 we have this hierarchy of ICAO sets the
 3 requirements for the member states. The
 4 member states or the country's regulator then
 5 sets the requirements and the regulations for
 6 the industry itself.
 7 This morning we talked about the
 8 intersect of regulation, the intersect of
 9 practices and the intersect of policies coming
 10 from two different regimes. So that's the
 11 aviation regime, and I want to acknowledge,
 12 for the record, that there is a complementary
 13 and parallel regime in the oil industry that
 14 actually does the same thing for the broader
 15 industry and there's, I guess, touch points
 16 from an aviation perspective.
 17 So moving towards this approach to
 18 adopting safety management systems, from my
 19 recollection, the earliest implementation of
 20 formal safety management systems was roughly
 21 around 1999-2000 where the concepts around
 22 safety management system were really
 23 developing from a regulator. In Australia,
 24 formal safety management systems were released
 25 to industry in 2001 with a very extensive

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1 education campaign to actually move that
 2 afoot. Transport Canada has built on a lot of
 3 the work that has been available and has got a
 4 structured phased in requirement for industry
 5 which actually sets up the timelines for
 6 various sectors of aviation to have their
 7 safety management system up in place. So
 8 there's this rolling phase of implementation.
 9 Transport Canada, in my view, is one of
 10 the only regulators in the world that has
 11 actually given quite defined guidance around
 12 the phasing of implementation for an aviation
 13 organization, in terms of implementing SMS,
 14 and there's a four-phased approach that they
 15 expect of the industry. So in terms of where
 16 the nation is currently at in SMS
 17 implementation, it's part of the way through.
 18 The higher end air carriers, such as air
 19 transport operators, Air Canada, et cetera,
 20 have already completed that process and then
 21 the rest of the aviation industry is following
 22 suit on various timelines.
 23 What I wanted to do was just take you
 24 through a bit of a global view around safety
 25 management systems. This does put in

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1 perspective and it does confirm that the
 2 aviation industry is an extremely global
 3 industry. Even the fact of aircraft
 4 manufacturing, engines, pilot training,
 5 regulations, better practice, there is a lot
 6 of cross pollination right around the world in
 7 the aviation sector.
 8 When we start looking at ICAO's
 9 definition of safety management system, you'll
 10 see that they've defined a safety management
 11 system as being an organized approach to
 12 managing safety. They also articulate that
 13 includes a number of different things,
 14 including definition around accountabilities,
 15 the organizational structures that are
 16 required for the safety practice and the
 17 policies and procedures. So really looking at
 18 the structural aspects and the policies.
 19 Then moving to the USA, the FAA has
 20 actually stated that the purpose of a safety
 21 management system is to provide a systematic
 22 way to control risk and to provide assurance
 23 that those risk controls are effective.
 24 ROIL, Q.C.:
 25 Q. So do I take it that the United States has not

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1 really defined safety management system as
 2 much as said where the purpose of it is. Is
 3 that--I don't see the definition in there.
 4 MS. TURNER:
 5 A. Yeah, that's -
 6 ROIL, Q.C.:
 7 Q. With all due respect to our friends in the
 8 United States.
 9 MS. TURNER:
 10 A. Yeah, that's correct. The different members
 11 states of ICAO, the FAA being one of them, are
 12 at different phases of their implementation
 13 and this definition that I've put up here
 14 outlines their objective and the purpose of
 15 the safety management system and work
 16 continues in respect to the definition of
 17 exactly what are the components of an SMS and
 18 the implementation and guidance material that
 19 is released to industry. But you can see from
 20 their definition here, we've got a few
 21 different things. They've described that it
 22 is a systematic way of controlling risk. We
 23 talked earlier this morning about control and
 24 influence about who actually, you know, sits
 25 in what area. You'll also hear the word

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1 "assurance" that we've talked a little bit
 2 about that the goal of a safety management
 3 system is provide assurance that the controls
 4 or those aspects that will close the holes in
 5 the swiss cheese are effective and they're in
 6 place.
 7 Taking you to the other side of the
 8 world, down under, the Australian regulator,
 9 CASA or the Civil Aviation Safety Authority,
 10 defines the safety management system as a
 11 businesslike approach to safety. It is a
 12 systematic, explicit and comprehensive process
 13 for managing safety risk, and so a couple of
 14 things that jump out to me in terms of this
 15 definition, outside that businesslike
 16 approach, if we talk about being businesslike
 17 the things that come to mind are it's
 18 organized, it's professional, it's planned,
 19 it's resourced and there's some type of
 20 measure that actually monitors the
 21 effectiveness of whether or not it's working,
 22 so from a businesslike approach.
 23 In terms of some of these other things
 24 here, they've defined that it's a
 25 comprehensive process. So what is that

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1 process. I believe that it's the application
 2 of that risk management process to help
 3 identify, assess and manage risk, and you'll
 4 see there, in terms of the connection there
 5 with managing, not financial risk or
 6 environmental risk or the compliance risk,
 7 it's actually there to manage safety risk,
 8 which fits very nicely to the intent of what
 9 our discussions are including today.
 10 So bringing it a little bit closer to
 11 home, in terms of Transport Canada's pitch or
 12 definition around an SMS, it says a safety
 13 management system is a documented process for
 14 managing risk that integrates operations and
 15 technical systems with the management of
 16 financial and human resources to ensure
 17 aviation safety or the safety of the public.
 18 So again, you can see a slightly different
 19 twist on the emphasis or the philosophy as you
 20 move around the world, but in essence, a
 21 safety management system is a structured
 22 approach to managing the safety risks that
 23 we've been talking about.
 24 The thing that is worthy of note, and
 25 this has been recognized right around the

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1 world in terms of Transport Canada’s approach
 2 to SMS, is this linkage with the operational,
 3 the technical, the financial and the people
 4 piece, and so although an aviation regulator’s
 5 jurisdiction is normally around the compliance
 6 requirements of regulating the aviation
 7 activity, Transport Canada, through this
 8 definition, has acknowledged that there are
 9 linkages, pressure points and connections with
 10 the technical, the operational, the people and
 11 the financial aspects of the industry and so
 12 that sits very nicely with that broader
 13 industry based risk profiling approach that we
 14 were talking about before is taking a more
 15 holistic view of how all of these different
 16 factors ultimately could impact or influence
 17 the safe operation of an aircraft.

18 ROIL, Q.C.:

19 Q. So does one just go out and buy a safety
 20 management system and incorporate it into
 21 one’s company? Is that the way it works?

22 MS. TURNER:

23 A. Well, it’s interesting you say that because
 24 from a compliance perspective and an
 25 expectation that you are to have a safety

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1 management system, there is a lot of those
 2 cookie cutter approaches that are popping up
 3 in terms of buy the software program or the
 4 template set or the CD with everything on it
 5 and just put in your name and move there, but
 6 there is a very strong recognition that that
 7 will not, in turn, shape the culture or change
 8 behaviours or assist with the decision making
 9 process. So in order to get that cultural
 10 change and shift, one of the things that is
 11 defined in the regulations or the supporting
 12 advisory material that goes with the
 13 regulations as such are what are those
 14 elements or components of a safety management
 15 system that define or create the environment
 16 that we talked about before, that will in turn
 17 influence behaviours, which will in turn shape
 18 the culture, so that linkage between
 19 environment, behaviours and culture.

20 So this diagram that I’ve put in front of
 21 you looks quite complicated. There are many
 22 components of a safety management system and
 23 this was developed back in 2007 and it was
 24 designed by our team at Aerosafe based on a
 25 series of compliance mapping that was

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1 undertaken with the SMS regulations from seven
 2 countries around the world, plus additional
 3 safety management system requirements in a
 4 number of other fields, and so what our team
 5 did, and this included Transport Canada’s
 6 work, ICAO, FAA, CAA in the UK, New Zealand,
 7 Australia, they went through all of the
 8 regulations and picked out the components and
 9 cross-mapped those and said, okay, what are
 10 the components of a safety management system,
 11 and these are the elements that were derived
 12 from that exercise.

13 So you’ll see that there’s, at the top
 14 end, we’re really looking at safety governance
 15 and oversight, the planning, the structure,
 16 making sure that there is some umbrella or
 17 infrastructure or framework that is in place
 18 to manage this safety profile. You can draw
 19 some really good parallels between a safety
 20 management system and a financial management
 21 system. If you were to establish a financial
 22 management system for an organization, you
 23 don’t rely on the intuition and the experience
 24 base of people to manage the finance of a
 25 company, and the larger the company that you

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1 have, the more structures you need in place to
 2 ensure accuracy, integrity, et cetera.

3 ROIL, Q.C.:

4 Q. So on a financial model, this would be
 5 financial governance and oversight?

6 MS. TURNER:

7 A. Yes, it would be.

8 ROIL, Q.C.:

9 Q. Okay.

10 MS. TURNER:

11 A. Then moving into the planning, this really
 12 comes down to that businesslike approach.
 13 There needs to be goals and objectives of what
 14 it is you’re trying to achieve. There needs
 15 to be a plan. There needs to be tasks
 16 allocated and resourced and there needs to be
 17 some type of checking mechanism to say well,
 18 if this is what we’re aiming for and that was
 19 our goal and our objective, did we achieve it.
 20 If yes, excellent. If no, why not and what
 21 needs to be adjusted in that area?

22 The next couple of aspects in terms of
 23 safety responsibilities, we hear that tagline
 24 all the time, safety is everyone’s
 25 responsibility or safety is our number one

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1 priority. This element of the safety
 2 management system is very specific and
 3 particular in assigning accountability and
 4 responsibility for various tasks to ensure
 5 that the safety management system works.
 6 This next element here is around action
 7 management. In going back to those
 8 definitions that I put forward before from the
 9 various locations around the world, you'll see
 10 that there was a turnaround. It's not just
 11 about knowing what the issues are. It's about
 12 doing something about it. As is the case with
 13 risk management, it's not just about
 14 acknowledging the risk, it's about doing
 15 something about it. So this action management
 16 component is really designed to ensure that
 17 that follow through is there and that the
 18 efficiency and the effectiveness is there.
 19 I just wanted to draw your attention to
 20 these three triangles that are actually in the
 21 middle of this SMS model. We've got safety
 22 policies and standards. We've got safety
 23 assurance and we have operational risk
 24 management. That reflects those elements of
 25 governance, compliance, assurance and risk.

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1 ROIL, Q.C.:
 2 Q. The three triangles we looked at earlier,
 3 before lunch?
 4 MS. TURNER:
 5 A. That's correct.
 6 ROIL, Q.C.:
 7 Q. Yes.
 8 MS. TURNER:
 9 A. So you can see these principles of corporate
 10 governance also have application from a safety
 11 governance perspective, just a much tighter
 12 and more specific application, and then the
 13 safety management system then starts going
 14 through the incident management and reporting
 15 systems. I mentioned before about the iceberg
 16 model and it was no mistake that the option to
 17 put all of these elements in this colourful
 18 chart was put in a triangle because it really
 19 does go down to in order for a catastrophic
 20 event to take place, the alignment of all of
 21 those holes in the cheese and all those
 22 potential things that happened on the day, be
 23 that operational, be that environmental, be
 24 that with the aircraft, with the procedures,
 25 with the tasking, with the decision making all

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1 the way back into the organization or the
 2 industry itself, have all aligned for that
 3 catastrophic event to take place. So the goal
 4 of the incident management and reporting
 5 system is on an occurrence basis or on a daily
 6 basis as little breakdowns happen for the crew
 7 and for the staff involved in the aviation
 8 activity to be aware of that and have an open
 9 reporting culture to put up their hand and
 10 disclose that. So that's a responsibility on
 11 the staff member or the crew member. The
 12 responsibility on behalf of the organization
 13 is to have the environment where that
 14 information is collated, it is trend--trending
 15 is done, information is considered and there's
 16 a process for action and review.
 17 ROIL, Q.C.:
 18 Q. This, I gather, might be something like the
 19 lessons learned objective, as opposed to the
 20 who shall we blame objective? You learn from
 21 incidents.
 22 MS. TURNER:
 23 A. Yes, and that issue around blame, there's a
 24 concept called just culture in the aviation
 25 industry and it really is a campaign to get

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1 the right level of thinking to be fair and
 2 just when errors occur, because we know that
 3 humans make errors. When humans interact with
 4 machines, with the environment, with other
 5 people or with procedures, there is a room for
 6 error and be that a mistake or a lapse or a
 7 purposeful breach in terms of an error,
 8 there's a whole discipline in classifying
 9 errors and in terms of this concept of just
 10 culture, it really is designed to encourage
 11 people to be open in their reporting, but when
 12 that incident report or that occurrence report
 13 comes forward that there is not an immediate
 14 blame or retribution in terms of punishing the
 15 person that's put up their hand to disclose
 16 this, because that really discourages
 17 reporting at all. So the aim of having an
 18 open incident reporting culture is that people
 19 will put up their hands. They will put
 20 information into the system for the better
 21 good of themselves, their peers and the
 22 organization itself.
 23 In saying that, this concept of just
 24 culture is really quite critical because if
 25 mistakes are occurring and there's at-risk

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1 behaviour where things happen on a repetitive
 2 basis, these incident reporting processes are
 3 really designed to try and identify those, so
 4 that they can be addressed from an
 5 organizational perspective. So it might be if
 6 there's a behaviour or a slight shift in
 7 behaviours where maybe it hasn't been noticed
 8 where potentially people used to do it this
 9 way, by the book, but over time, it just has
 10 kind of shifted that the procedure has just
 11 slightly morphed or amended and I'm sure we've
 12 all got our own personal examples of how
 13 that's happened.

14 ROIL, Q.C.:

15 Q. The example of the cell phone usage in the
 16 taxi might be an example of where human beings
 17 know that what they're doing is not what they
 18 should be doing, but I'll get away with it
 19 this once?

20 MS. TURNER:

21 A. That's right, and I don't know how many of you
 22 have used your cell phone or your mobile phone
 23 in the car, but if you get used to that
 24 practice and you do it all the time, how long
 25 does it take for you then to do that while

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1 you're then doing something else, changing the
 2 radio, writing on a sticky pad, you know, et
 3 cetera? So it's just that shift of when a
 4 practice becomes normal, then that variation
 5 or that deviation can set in and take place.
 6 So there's a lot of psychology behind the
 7 whole idea around cultural assessment,
 8 evaluation, decision making and behaviours and
 9 in the aviation industry, because the human
 10 factor is so key to everything that's done,
 11 there really is a depth of unpacking that
 12 occurs in that aspect.

13 So the incident management and reporting
 14 component of the safety management system is
 15 extremely key, but as we said right upfront,
 16 that's more the reactive after the event,
 17 whereas the risk management component is
 18 looking at the activities that you undertake
 19 in a proactive way to try and look at what
 20 could go wrong, not what has gone wrong. So
 21 when you combine the reactive with the
 22 incident reporting and the proactive, the risk
 23 management, it actually gives you a complete
 24 picture. Just as is the case with this
 25 Inquiry, we have the event or the accident

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1 investigation of what has happened versus what
 2 could potentially happen in terms of the
 3 system and the environment with the changes
 4 and the situation. When you combine those,
 5 you actually get a very clear and sound
 6 picture.

7 Now is incident management and reporting
 8 new in the aviation industry? I'd say
 9 definitely not. The incident management or
 10 incident reporting aspect has always been a
 11 key focus of the industry, whether or not
 12 that's just verbal debriefing or whether or
 13 not it's written on a paper-based form. I
 14 would say that incident reporting has been
 15 fairly prevalent across the aviation industry
 16 for at least 20 years. So what's different
 17 about the SMS or the safety management system?
 18 The safety management system is really
 19 designed to then take that information and
 20 connect it in with the management and the
 21 decision making practices to give visibility
 22 and transparency at the highest level so that
 23 the right resources can be allocated and the
 24 profile can be looked at.

25 You've then got a number of other

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1 components here, safety training, safety
 2 communications and education. They're really
 3 designed around the people piece, to give
 4 people the skill sets, the knowledge and the
 5 information needed to shape the attitudes and
 6 behaviour. The records and data management,
 7 there is actually a lot of information that
 8 floats around in the safety world and so that
 9 element of the SMS is all just designed to
 10 organize the information as well, and then
 11 you'll see this foundational element, which is
 12 really around the culture and again that
 13 hasn't been put in there by mistake or by
 14 error, it's actually been very deliberate that
 15 that cultural development is a real key
 16 foundation. So the bookends of the SMS are
 17 really your culture and then at the top end,
 18 the leadership, the tone from the top and the
 19 oversight and governance arrangements.

20 So that just provides a brief snapshot of
 21 a safety management system. Is it complex and
 22 complicated? In one way, yes. In another,
 23 no, but certainly when you look at what's at
 24 stake from a safety exposure perspective,
 25 certainly putting the effort into structuring

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1 the efforts around that framework are
 2 warranted and well justified.
 3 So in terms of what does a safety
 4 management system look like, I've just walked
 5 you through those components. You'll see that
 6 most regulators around the world are moving
 7 more towards a principle based approach to
 8 SMS. So what I mean by that is rather being
 9 prescriptive and saying you must have an
 10 online incident reporting system with these
 11 five or six different forms and templates,
 12 with a manual that has these things. You'll
 13 see this principle based approach is more your
 14 safety management system must have a process
 15 in which you do this. It must have a process
 16 for evaluating effectiveness of the actions
 17 that are put in place, and so it's really more
 18 principle based as opposed to procedurally
 19 oriented.
 20 ROIL, Q.C.:
 21 Q. If I use the expression outcome based rather
 22 than prescription based, as I think other
 23 witnesses have used those kinds of
 24 expressions.
 25 MS. TURNER:

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1 A. Yes, and that term "outcome based" or
 2 performance based regulation -
 3 ROIL, Q.C.:
 4 Q. Yes.
 5 MS. TURNER:
 6 A. - is really about what are we trying to
 7 achieve. We want to provide assurance that
 8 the organization has a means by which they can
 9 self manage and manage these issues. Now that
 10 doesn't take away the requirement for
 11 regulatory checks and inspection.
 12 ROIL, Q.C.:
 13 Q. I was going to ask that question, because how
 14 do you then know that you--or how do you do
 15 your audits? How do you check on things that
 16 are not prescriptive? That's the challenge, I
 17 think, that people have to understand is how
 18 do you audit something that simply says you
 19 have to have a process to achieve.
 20 MS. TURNER:
 21 A. What it comes down to is actually evaluating
 22 the complete nature of the process and whether
 23 the process is formalized, whether it is able
 24 to be duplicated within an organization and
 25 whether there's consistency of application.

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1 So what you're doing is rather than auditing
 2 for compliance, you're actually evaluating for
 3 effectiveness. So you could have a process,
 4 yes, I have it, but does it work? Kind of.
 5 You know, it works sometimes. It works in
 6 these conditions. So that's really why we're
 7 evaluating for its effectiveness. Is it fit
 8 for purpose? Does it suit the context of the
 9 organization? If the organization changes and
 10 grows, does it actually cater for that and
 11 adapt as the organization does?
 12 There really is some difficulty in the
 13 aviation industry in truly understanding how
 14 you get one of these, how you get a safety
 15 management system. Many of the components are
 16 already in place and if we went back a slide
 17 to that diagram, many organizations could say
 18 yes, I have a committee. I have processes. I
 19 have risk assessments. I have training. I
 20 have, you know, all of these different aspects
 21 and so really it's about what else does it
 22 take and I would say the key differences are
 23 that connectivity with the governance aspect
 24 and really that monitoring at that other
 25 level.

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1 The other most visible aspect and change
 2 from just a traditional safety program to a
 3 safety management system is this uptake of the
 4 management of risk and the formal process that
 5 goes alongside that and then just jumping back
 6 to the discussion we had just briefly before
 7 about the integration, the risk management
 8 piece can be applied at the operational level,
 9 can be applied in the change aspect, in new
 10 ventures or it can be applied at the corporate
 11 or business level.
 12 So the fourth component that I wanted to
 13 run through was really on the contract
 14 management aspect and my particular area of
 15 expertise is focusing on the risk management
 16 and the safety management system component of
 17 contract management, as opposed to the
 18 procurement and the selection of a contractor,
 19 et cetera. So in looking at this
 20 relationship, if we go back to really
 21 acknowledging or agreeing that there are two
 22 different environments that intersect in this
 23 aircraft and -
 24 ROIL, Q.C.:
 25 Q. That goes back to our helicopter slide. Is

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<p>1 that what you're talking about?</p> <p>2 MS. TURNER:</p> <p>3 A. Yes, that's right, the helicopter slide with</p> <p>4 the different regimes which that aircraft are</p> <p>5 subject to or the people in that aircraft are</p> <p>6 subject to. From a contract management</p> <p>7 perspective, when you contract aviation</p> <p>8 services, there is an expectation that they</p> <p>9 would be compliant with the aviation</p> <p>10 regulations. So that's a given. However,</p> <p>11 there is nothing stopping a customer or the</p> <p>12 organization requesting the service to set</p> <p>13 their standards at a higher level.</p> <p>14 ROIL, Q.C.:</p> <p>15 Q. Or the regulator? Could a regulator set that</p> <p>16 standard at a higher level?</p> <p>17 MS. TURNER:</p> <p>18 A. Such as the Petroleum Board?</p> <p>19 ROIL, Q.C.:</p> <p>20 Q. Yes.</p> <p>21 MS. TURNER:</p> <p>22 A. Yes. Yes, absolutely. So in terms of this</p> <p>23 additional level or going beyond compliance,</p> <p>24 any of those organizations that have a</p> <p>25 oversight role or a governance role, need to</p>	<p>1 referring to, in that context, the aviation</p> <p>2 regulator.</p> <p>3 ROIL, Q.C.:</p> <p>4 Q. Ah.</p> <p>5 MS. TURNER:</p> <p>6 A. As opposed to the other industry, and that's</p> <p>7 quite important because we talk about these</p> <p>8 two different industries intersecting in the</p> <p>9 aircraft. From an aviation regulator's</p> <p>10 perspective, they'll be very quick to let you</p> <p>11 know that the aviation rules and regulations</p> <p>12 are minimum compliance, they're not better</p> <p>13 practice, and they're certainly not those</p> <p>14 higher standards. So it caters for the</p> <p>15 minimum requirements that are expected. So as</p> <p>16 you've rightly pointed out, Mr. Roil, in terms</p> <p>17 of other influences on that asset or that</p> <p>18 capability, there is nothing stopping those</p> <p>19 extra boundaries or those extra layers being</p> <p>20 put in place.</p> <p>21 ROIL, Q.C.:</p> <p>22 Q. So I take it that even the oil company which</p> <p>23 are contracting the aviation company could put</p> <p>24 an additional layer above the minimum</p> <p>25 Transport Canada standard?</p>
<p>Page 170</p> <p>1 make a decision as to how much is enough and</p> <p>2 where do you want to put those standards or</p> <p>3 those buffers. Purely relying on the basic</p> <p>4 compliance requirements may not necessarily be</p> <p>5 enough, depending on the context of your</p> <p>6 operation. The regulators around the world</p> <p>7 will readily admit and agree that their</p> <p>8 regulations are pitched at minimum compliance.</p> <p>9 ROIL, Q.C.:</p> <p>10 Q. Okay, I have to stop you there because I think</p> <p>11 in fairness to the C-NLOPB during their</p> <p>12 evidence, they indicated that they, for</p> <p>13 example, require a twin turbine -</p> <p>14 MS. TURNER:</p> <p>15 A. Yes.</p> <p>16 ROIL, Q.C.:</p> <p>17 Q. - helicopter, whereas -</p> <p>18 MS. TURNER:</p> <p>19 A. Which is beyond.</p> <p>20 ROIL, Q.C.:</p> <p>21 Q. - a single turbine would be--could be</p> <p>22 considered as acceptable in terms of the</p> <p>23 regulatory regime.</p> <p>24 MS. TURNER:</p> <p>25 A. Yes, and when I refer to regulator, I'm</p>	<p>Page 172</p> <p>1 MS. TURNER:</p> <p>2 A. Absolutely.</p> <p>3 ROIL, Q.C.:</p> <p>4 Q. And then the regulator, the C-NLOPB, can put</p> <p>5 another layer on top of that?</p> <p>6 MS. TURNER:</p> <p>7 A. That's correct, and it really comes down to</p> <p>8 the organization's tolerance or appetite for</p> <p>9 risk, and what level of risk they're willing</p> <p>10 to accept or, you know, be aware of in that</p> <p>11 sense, and we might have some discussion later</p> <p>12 about the level of acceptable risk and who</p> <p>13 defines that, or the level of risk that is</p> <p>14 tolerated in order to achieve an outcome or an</p> <p>15 aim, and I'd like to come back to that because</p> <p>16 ultimately where you put that -- where you put</p> <p>17 your requirements and your standards is a</p> <p>18 reflection on your knowledge or appetite or</p> <p>19 comfort level of the risk, and there's a</p> <p>20 risk/reward equation and there's also a cost</p> <p>21 of risk, and there's a cost of managing risk.</p> <p>22 So you really do get into some interesting</p> <p>23 areas where an organization needs to have a</p> <p>24 consciousness around those decisions as</p> <p>25 opposed to it happening intuitively.</p>

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1 ROIL, Q.C.:

2 Q. Uh-hm.

3 MS. TURNER:

4 A. So from a contract management perspective, if

5 I could just separate for a second and put

6 this in context, if an organization is

7 contracting an aviation provider or any

8 provider would be the same, the organization

9 has the choice to set some standards. Now one

10 would assume that that organization would have

11 a level of assurance that the organization

12 that they're contracting are compliant and how

13 that's achieved needs to be structured and how

14 you gain that confidence, but in saying that,

15 the organization selecting the operator or

16 establishing that contract can set additional

17 standards, and so the role of the organization

18 is to set standards and to check the

19 performance against the standards. The role

20 of the organization that is contracted is to

21 deliver on their standards, either

22 contractually or through their other

23 obligations. It really comes down to

24 providing assurance that these things are

25 adequate, that they're in place, and that

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1 they're to the level of comfort that is

2 required by the organization. I just separate

3 regulator for a second because I think that's

4 really a very similar process, but that is set

5 from a society's tolerance, and where the

6 community expectation is about what is that

7 level of minimum compliance.

8 ROIL, Q.C.:

9 Q. So the community's expectation of acceptable

10 or tolerable risk might be different than the

11 contracting parties?

12 MS. TURNER:

13 A. Yes, it could be, and, for example, when you

14 buy a ticket and you're a fare paying

15 passenger to go from here to Montreal, then

16 you actually expect a certain level of safety.

17 So in purchasing that ticket, you have an

18 expectation that there is a regime in place

19 that actually sets a particular level of

20 safety. So there is a differentiation around

21 what level of risk is acceptable and who makes

22 that determination. Is it the regulator, is

23 it the airline, or is it the person that buys

24 the ticket, or does every one of those three

25 groups actually have a role to play in risk

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1 acceptance, and then who actually controls the

2 risk or has the opportunity to influence and

3 reduce the risk. It generally is those that

4 have the resource to implement an activity or

5 an action to control that.

6 ROIL, Q.C.:

7 Q. By the resource, you mean the money or just

8 the ability to make it happen?

9 MS. TURNER:

10 A. Both, both, but certainly the ability to make

11 it happen is extremely important because as a

12 passenger, do you have control over the

13 pilot's standards; no. As a passenger, do you

14 have control over, you know, the baggage

15 handling system at the airport; no, but you

16 have an expectation of what the outcome is,

17 outcome based performance with that. So

18 there's just different accountabilities of the

19 identification of risk, the acceptance of

20 risk. If the risk is not acceptable, whether

21 it's willing to be tolerated for a particular

22 outcome or an aim, and then whose job is it to

23 actually implement risk treatment strategies

24 and that's actually why we talk about an

25 integrated safety management system, because

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1 these issues aren't mutually exclusive. You

2 can't have one organization that has 100

3 percent control over every single input into

4 that environment. So in terms of the

5 corporate responsibilities for aviation safety

6 management system, from a contracting

7 organization's perspective, there is an

8 opportunity and control for aircraft

9 capability definition. As the customer, what

10 do you require these aircraft to do, what type

11 of operation are we looking at, what is the

12 actual specs that we're after. The second one

13 is aircraft selection. Now obviously the

14 aviators have a very large influence with

15 their expertise about advising on that

16 decision, but ultimately, depending on where

17 the resource comes from, that aircraft

18 selection is really quite key and important,

19 and then the last aspect which would be

20 considered in the contract safety and risk

21 management is the oversight for the system.

22 So are the standards being met, are the

23 processes in place, are they adequate, are

24 they fit for a purpose, do they work, and

25 really getting that connection from a

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1 compliance confirmation, the assurance, and in
 2 the management of risk. So you can see that
 3 within any industry that contracts aviation
 4 service, this relationship between base level
 5 aviation regulatory compliance, higher level
 6 standards, the expectation, what's set from a
 7 contractual perspective and how that's
 8 actually monitored and that assurance takes
 9 place is really very, very key, and I've
 10 mentioned this a few times today, but this in
 11 itself is actually quite a defined field of
 12 practice.
 13 ROIL, Q.C.:
 14 Q. Okay, I think we're -- yeah, I'd like to bring
 15 you back to the whole issue of risk and some
 16 general discussion at the end.
 17 MS. TURNER:
 18 A. Uh-hm.
 19 ROIL, Q.C.:
 20 Q. Perhaps we'll continue on now with your
 21 presentation and the -- how we can, will, and
 22 hope to benefit from adopting this approach.
 23 MS. TURNER:
 24 A. Thanks. Now that's great, John, and just
 25 before I dive into this Part V, I just want to

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1 recap what I've covered today. This morning I
 2 spent some time really talking through the
 3 management of risk and the formal discipline
 4 and the structures around that. I also took
 5 the time to outline the industry risk
 6 profiling process and the methodology behind
 7 it, how it's conducted, and the expected
 8 output, and then we've just spent this last
 9 little bit of time after lunch going through
 10 some related disciplines, the relationship of
 11 corporate governance being compliance,
 12 assurance, and the management of risk, looking
 13 at the integration of risk management to
 14 connect those different layers, particularly
 15 from a change perspective and those new
 16 ventures. Thirdly, looking at the safety
 17 management system and the emergence of that as
 18 a discipline in the aviation industry globally
 19 and more locally here in Canada, and then
 20 finally looking at how all of those concepts
 21 are actually put in practice in the
 22 environment where the aviation service is
 23 contracted and how that alignment to connect
 24 and integrate those practices needs to take
 25 place. So it's been fairly, you know, high

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1 level overview of this material and a lot of
 2 concepts, but the practical application, I'm
 3 sure we're going to see some good examples of
 4 that over the next couple of weeks, and, you
 5 know, really filtering from that high level
 6 overarching governance of, you know, what
 7 takes place at that real corporate level, all
 8 the way through down into the operational
 9 practices the pilots, the crew, and the
 10 operators participate in. So just finally,
 11 this is just my last bracket. Going through
 12 the use of these risk management concepts and
 13 everything we've presented today with the
 14 Inquiry itself, I did say that this is
 15 actually quite an innovative approach to
 16 conducting a public Inquiry, which is to
 17 really look at the risks themselves, and look
 18 at that more holistic view around the
 19 environment, the industry, in order to provide
 20 confidence that there is a sound regime in
 21 place to ultimately prevent or minimize things
 22 such as these aircraft accidents happening
 23 again in the future. There needs to be
 24 recognition that aviation activities are not
 25 free of risk. Risk is inherent purely by the

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1 nature of defying gravity and actually flying,
 2 but certainly the complexities of the
 3 operating environment is such that risks and
 4 hazards exist and are ever present. If you
 5 recognize and accept that concept of the swiss
 6 cheese model in terms of where failures and
 7 breakdowns can occur, and if a series of those
 8 events line up, then it could have a
 9 catastrophic event or a catastrophic event
 10 could happen. Now that accident causation
 11 model can be used in reviewing an event, but
 12 it can also be used in a proactive way in
 13 looking at the whole setup in the system, from
 14 the operational to the organizational, to the
 15 industry definition and structure, to look at
 16 are there any gaps or overlaps in the
 17 practices, are there any potential
 18 vulnerabilities that if the environment
 19 changes, the hole could get bigger or the hole
 20 could shrink, and from a proactive
 21 perspective, do we know where these holes are,
 22 and do we know how big they are, and do we
 23 know what needs to take place in order to
 24 close and block that gap. So if you do
 25 recognize that that accident causation model

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1 has application in a proactive way, then it
 2 really does lend itself to using some of these
 3 industry risk profiling techniques. There are
 4 relationships within relationships within
 5 relationships in this discipline. I often get
 6 asked the question, "Kimberley, what's the
 7 superior practice; safety or risk", and it's
 8 quite a challenging question to answer because
 9 it depends, it depends on which perspective
 10 you're looking at it from, but certainly that
 11 integration of governance, change, and
 12 operations, through risk management
 13 demonstrates that risk management is an
 14 overarching umbrella, but it also sits within
 15 each layer as a particular process itself.
 16 The ultimate aim, as I mentioned before, is to
 17 provide assurance or high level of confidence,
 18 or where possible, even a guarantee that
 19 everything reasonably practical or expected is
 20 being done in order to position the
 21 organization or the operation itself to
 22 minimize or remove as much risk as possible.
 23 In terms of aligning the various phases of the
 24 development of a risk profile to the Inquiry
 25 and to the Inquiry processes, you can just see

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1 here that in the preparation phase prior to
 2 this public aspect, the public hearing, some
 3 work has been done around the context and the
 4 methodology and drawing the boundaries, even
 5 looking at the stakeholders of who are the
 6 stakeholders of this industry. So currently
 7 in this Phase 1A, the context will be refined
 8 and the issues identification and data
 9 collection takes place, really to look at the
 10 risk identification. In Phase 1B, and the
 11 investigative phase, this is really where the
 12 opportunity exists for the draft risk profile
 13 to be developed in consultation, utilizing the
 14 information that's available, and certainly
 15 from my perspective, the more involvement the
 16 various stakeholders have, the more valuable
 17 and the more accurate this profile will be.
 18 In Phase 1C, in terms of the response to the
 19 investigative phase, I expect some very, very
 20 good interaction and consultation where
 21 there's an opportunity for ideas to be put
 22 forward or for risk treatment strategies to be
 23 developed or suggested that could be
 24 implemented to minimize the risk. We also
 25 have -- well, following that, we anticipate

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1 the submission of a draft industry risk
 2 profile to the Commissioner as requested, so
 3 that that can be used in the deliberations in
 4 the Inquiry process itself, as the
 5 Commissioner's recommendations and findings
 6 are actually being developed. Finally, after
 7 the TSB comes out with the accident
 8 investigation report, I envisage just a
 9 process of validating the risk profile and
 10 seeing if there's any additional issues that
 11 weren't brought up in the industry risk
 12 profiling process up to Phase 1C that need to
 13 be incorporated, and any amendment taking
 14 place, given that that may be information that
 15 we don't have access to prior to that point.
 16 So that's a little bit of an overview about
 17 the alignment of the risk profiling setup
 18 against the phases, and certainly I look
 19 forward to, you know, interacting with
 20 everybody on this and certainly walking down
 21 the path of developing this draft profile for
 22 the Commissioner.
 23 ROIL, Q.C.:
 24 Q. Okay, thank you. I have a series of questions
 25 that I would like to put to you, and these are

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1 not something that you and I have talked
 2 about, but it comes out to me from what you've
 3 said and others have said. I'm going to give
 4 you a number of scenarios and individuals or
 5 positions, and I'd like you to comment on what
 6 risks each of these individuals takes has some
 7 impact on, can control --
 8 MS. TURNER:
 9 A. Uh-hm.
 10 ROIL, Q.C.:
 11 Q. And so on. We have the traveller, we have the
 12 pilot, we have the manager of the helicopter
 13 company, we have the oil company executive,
 14 and we have, let's say, the safety officer of
 15 the C-NLOPB. In terms of aviation safety, I
 16 think we've all heard that nobody will
 17 guarantee that nothing can go wrong.
 18 MS. TURNER:
 19 A. Yes.
 20 ROIL, Q.C.:
 21 Q. So in terms of the risks of harm, where do
 22 these people have opportunities to have
 23 inputs, and where do they have to accept some
 24 of the responsibility or some of the risk and
 25 put it on their own shoulders?

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1 MS. TURNER:
 2 A. Yes, sure. Now that's certainly an
 3 interesting bracket of question, and what I'd
 4 like to do is I'd like to start at a senior or
 5 a corporate level and then work my way down to
 6 the operational staff.
 7 ROIL, Q.C.:
 8 Q. You can take the individuals in whatever order
 9 you --
 10 MS. TURNER:
 11 A. That sounds great. I might come back to the
 12 C-NLOPB and the role of the safety officer.
 13 Actually, I'll cover that now. From a
 14 regulator's perspective, now not talking about
 15 the aviation regulator, I guess there is a
 16 expectation that the standards or the
 17 requirements that are expected of someone
 18 working under that regulatory regime are well
 19 defined, that are well constructed, that are
 20 fit for purpose, and that are at an
 21 appropriate level of depth. So whether that's
 22 the actual safety manager or safety executive,
 23 or whether that's the Board as an entity
 24 itself, the safety executive or safety manager
 25 would be the delegate charged with, and with

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1 the right subject matter expertise, to make
 2 that happen, but certainly in terms of making
 3 a determination as to where that level of
 4 standard needs to sit is really important on
 5 behalf of the industry, and whether or not
 6 that's minimum compliance, or whether or not
 7 that's a higher standard, and where that line
 8 is put in the sand, that really comes down to
 9 defining -- now in itself, through that
 10 process, there is an implied level of
 11 acceptance of risk, of where you draw that
 12 line in the sand, and so that's done at that
 13 industry level. So that would cover off on
 14 the regulatory side. Then moving down in
 15 terms of an oil executive, the role of any
 16 leadership in an corporation is to ensure a
 17 few things. Firstly, that a framework is
 18 established within the organization that
 19 allows for these practices to take place.
 20 Secondly, to direct that a system is developed
 21 and appropriately implemented, and I emphasize
 22 that "appropriately implemented", as many
 23 organizations develop systems and maybe don't
 24 follow through on the complete roll out and
 25 introduction, and thirdly, that there's a

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1 monitoring of that whole system for its
 2 adequacy and for the information that is being
 3 moved through that system, and that there's a
 4 high level of transparency at that executive
 5 level around the profile itself; where are the
 6 safety issues, are the key safety issues being
 7 accepted at the right level, is there
 8 appropriate resource put in place to manage
 9 those safety risks, and so that, in my view,
 10 would be the role of the oil executive. Hence
 11 that would really fall under that governance
 12 bracket that we talked about before. So
 13 there's a legal and a moral obligation for
 14 corporate governance, but there's also a
 15 regulatory and moral obligation for safety
 16 governance, and I would expect, and certainly
 17 in drawing those lines of requirement, that
 18 there is integration between safety and some
 19 of those other components that Transport
 20 Canada nicely states in their SMS definition
 21 around the human dimension, the operational,
 22 the financial, et cetera. So that there is
 23 that monitoring at that level. So that would
 24 be my type. Now in terms of acceptance of
 25 risk, it's very difficult to accept risk if

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1 you don't have information on what the risks
 2 are, and so certainly tools such as a
 3 corporate risk profile or a corporate risk
 4 register are effective tools in highlighting
 5 those areas so a decision can be made. It is
 6 not uncommon in either the oil industry or
 7 other industries, such as the power industry,
 8 or the mining industry, that contract aviation
 9 service, for aviation risk to constantly pop
 10 up as one of the highest areas of concern.
 11 Recently working with a powerline company back
 12 in Australia, the aviation risks were in the
 13 top four, and top four risks at the corporate
 14 risk profile was the concern around the
 15 aviation exposure. Now was that because they
 16 have had an accident; no. Was it because it's
 17 a complex environment and it's a complex asset
 18 and it's a complex operating environment; yes.
 19 So you can't remove all risk, so a decision
 20 needs to be made, do you want the outcome of
 21 using helicopters or aviation assets; if so,
 22 do you understand the risks and is the
 23 organization aware and risk aware, and is that
 24 actually on their profile. So some really
 25 interesting things there. From a corporate

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1 perspective, there is also an implied
 2 acceptance of risk in the level and type of
 3 resource that's allocated to that capability,
 4 be that through the selection of aircraft,
 5 through the funding, basically the resourcing,
 6 because when you're looking at risk and risk
 7 treatment strategies, you can reduce risk a
 8 long way if you've got the right level of
 9 resource, and so the question is, do you have
 10 a process in place to actually undertake and
 11 execute that assessment and that decision
 12 making process, or is it purely intuitive.
 13 Getting down to the manager of the company,
 14 and Mr. Roil, I take it that that would be the
 15 aviation company?
 16 ROIL, Q.C.:
 17 Q. Yes, that's right.
 18 MS. TURNER:
 19 A. I would see the responsibilities of that
 20 person to obviously work within the regulatory
 21 framework and the expectation of the customer,
 22 and the oil company, but also to ensure that
 23 local application and implementation of those
 24 systems and processes, also in terms of
 25 monitoring the culture to make sure that the

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1 behaviours are where they need to be, that the
 2 right information is open, that there an open
 3 and just reporting culture, and that if issues
 4 do arise, they're handled in a way that is
 5 fair and balanced and actually continues to
 6 encourage that openness. In terms of the
 7 acceptance of risk, it really shifts a notch
 8 from setting the broader expectations into
 9 where the company actually sits. I believe
 10 one of the key areas for this position is
 11 actually to manage the risk associated with
 12 change. So say if we have a number of
 13 aircraft and our company profile hasn't
 14 changed, we're doing the same job year in and
 15 year out, and then all of a sudden we have an
 16 expansion of opportunity where we could now
 17 bring on another one or two aircraft to expand
 18 the market, well, what are the business risks
 19 associated with that change or that new
 20 venture, what impacts could they have on that
 21 operational aspect of the organization, and
 22 are the right decisions being made from a
 23 business perspective that can have that
 24 operational impact. So that's one aspect of
 25 that role. The second is really looking at

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1 the operational oversight to ensure compliance
 2 and to ensure that the risks are being managed
 3 and that guidance is put in place. So there
 4 is a level of acceptance that takes place with
 5 how far an organization goes beyond compliance
 6 and goes beyond that minimum expectation. In
 7 terms of the pilot, if we were looking at the
 8 lines of defense and the swiss cheese, the
 9 pilot and the crew when they get in the
 10 aircraft and go and undertake their tasks, are
 11 really some of those last layers of defense.
 12 So they're already selected, recruited,
 13 trained, given an aircraft, familiar with the
 14 area, so when they're undertaking the task,
 15 really that's at the frontline looking at
 16 those various issues. So the risk again or
 17 risk acceptance shifts a notch into what is
 18 often referred to in aviation circles as
 19 "operational risk management", or the quick
 20 risk assessment process of decision making,
 21 pilot decision making on the day, dealing with
 22 the range of different things that happen,
 23 environmental changes, situation changes,
 24 mechanical issues, warning lights, et cetera,
 25 all of those inputs that happen in the cockpit

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1 and in the aircraft itself. So that decision
 2 making is often referred to as "airmanship",
 3 aeronautical decision making, or situational
 4 awareness. So pilots are actually recruited
 5 for their suitability for that type of
 6 situational awareness and those traits and
 7 characteristics of that type of ability to
 8 respond, and it's actually quite a task,
 9 particularly in a challenging environment
 10 where things can change so quickly, and the
 11 weather can change, and, you know, there's a
 12 range of different things. So you have the
 13 manager of the organization that sets up the
 14 environment and the pilot that works within
 15 that, and then their role in acceptance of
 16 risk is making judgment decisions on the day
 17 with the hazards, the threats, the changes,
 18 and the risks that actually come about in that
 19 day to day area. The final one is the
 20 passenger. Now this is really interesting.
 21 Does the passenger have a role in the
 22 acceptance of risk; absolutely. Does the
 23 person choose to get on the aircraft;
 24 absolutely. But what level of choice.
 25 There's a few different levels of choice here.

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1 I think certainly in the context that we're
 2 talking about here in terms of offshore
 3 petroleum or offshore oil workers, there is a
 4 choice to work in that industry as opposed to
 5 another industry. So the reliance on
 6 helicopter transportation is part of that job,
 7 is part of that setup, and is known. So, I
 8 guess, from a risk acceptance perspective,
 9 that decision is made when the job is
 10 accepted, and it may not necessarily be done
 11 on a day to day basis, but certainly in that
 12 broader context. Does the participant or the
 13 passenger actually have a role in the
 14 operational risk; the answer is yes, and
 15 there's a discipline called Crew Resource
 16 Management that takes place, and CRM is all
 17 about what role does the people in the
 18 aircraft have, the safe operation of the
 19 flight, and although you've got some pilots at
 20 the controls who are charged, equipped, and
 21 trained to operate the aircraft, everyone in
 22 that aircraft actually plays a part, from the
 23 passenger briefing, to loading and unloading
 24 the aircraft, through to if something doesn't
 25 look right, to actually have the confidence to

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1 actually speak up and say something, and there
 2 is a move afoot and it has been in place for
 3 at least five years in my experience, where
 4 these industries that have a joint
 5 responsibility for safety and helicopter
 6 operations, but they're employed by different
 7 legal entities; one with the aviation provider
 8 and one with the customer, there's this, I
 9 guess, move for joint crew resource management
 10 training for everyone to be aware of what the
 11 hazards are, so that they can participate in
 12 that. So there is different layers of risk
 13 acceptance. Unfortunately, when an event
 14 happens or an accident happens, we've talked a
 15 lot about the difference between an accident
 16 and risk. Risk is the chance of something
 17 happening, where an accident or a safety
 18 occurrence is actually the event has happened
 19 as opposed to could happen, and so I think
 20 none of us in any of those roles would openly
 21 accept the accident, of the event eventuating
 22 or having a certainty around that event, but
 23 certainly from a risk perspective, an
 24 awareness, a tolerance, and most importantly,
 25 the role in doing as much as you can to make

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1 sure the conditions are such that that risk is
 2 managed is extremely important. So a long
 3 answer to a complex question and one that I'm
 4 sure that we all have our different views on,
 5 you know, in that.
 6 ROIL, Q.C.:
 7 Q. Thank you very much. Those are all the
 8 questions that I have for Ms. Turner,
 9 Commissioner. I don't know whether you would
 10 want to take the afternoon break now to give
 11 her a moment to --
 12 COMMISSIONER:
 13 Q. It might be a good time take a break, and
 14 people can collect their thoughts on what
 15 questions they may wish to ask. So we'll take
 16 a break now.
 17 RECESS
 18 COMMISSIONER:
 19 Q. Mr. Roil.
 20 ROIL, Q.C.:
 21 Q. Yes, Commissioner, I actually have a couple of
 22 small follow up questions that occurred to me
 23 while I was looking at my notes through the
 24 break, and with your leave, I'll just put a
 25 couple more to Kimberley.

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1 MS. TURNER:
 2 A. Sure.
 3 ROIL, Q.C.:
 4 Q. Kimberley, a couple of times in your
 5 presentation you talked about "my team", and I
 6 hope that you consider that Anne and I are
 7 part of your team, but I don't think you were
 8 talking about that at the time. So just that
 9 we understand, what else is in there behind
 10 Kimberley Turner in Aerosafe, what kind of
 11 resources do you have, either that are working
 12 with you or that are available to you on a
 13 contract basis?
 14 MS. TURNER:
 15 A. Yes, sure. As I mentioned in my introduction,
 16 I established the organization back in 1996,
 17 and we've been going strong for that time. In
 18 terms of our team composition, we have roughly
 19 50 staff globally.
 20 ROIL, Q.C.:
 21 Q. Yes, you mentioned that number, but you didn't
 22 indicate what sort of skills.
 23 MS. TURNER:
 24 A. That's right. We have a mix of different
 25 skillset. I'll talk about their professional

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1 background first, and then their experiential
 2 background. Basically within our organization
 3 we have six chief subject matter experts or
 4 senior subject matter experts in the risk
 5 management discipline. Then we have tiers of
 6 risk advisors. So we have the senior risk
 7 advisors and the risk advisors in that team.
 8 We also have two other types of staff within
 9 our organization. The staff that do training
 10 facilitation, about 40 percent of our work is
 11 actually in training delivery and education,
 12 both short courses, all the way through to
 13 post-graduate qualifications, because as you
 14 can see, it's quite a complex topic and
 15 there's a lot of concepts that sit behind
 16 that. Then we have a small team of
 17 operational staff and administrative staff
 18 that help assist in supporting our client
 19 base. Obviously, it takes a little bit to get
 20 people all around the world to undertake this
 21 work. Now in addition to our risk management
 22 background and qualifications, 60 percent of
 23 our organization has aviation expertise. So
 24 we have staff on our team who are pilots, both
 25 fixed wing and rotary; operations staff, we

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1 have a maintenance engineer, two air traffic
 2 controllers, and so we have a fairly broad mix
 3 of those skillsets across the aviation
 4 industry itself. In terms of what we do as an
 5 organization, there's three components of the
 6 company. First is the consultancy aspect,
 7 which is doing project work to give advice or
 8 support organizations in facilitating risk
 9 assessments, risk profiles, et cetera. So
 10 those one off jobs. Then as I mentioned,
 11 training and education is a very, very large
 12 part of our business, and it's really
 13 interesting that that's evolved. That's very
 14 unusual for traditional consulting firm to
 15 actually get into education and training, but
 16 certainly it really does take a shift in
 17 thinking to really grasp these topics to take
 18 it beyond just filling in the forms and the
 19 paperwork. So education has been a big
 20 passion of ours right from the mid 90s. Then
 21 the third part of our business is we provide
 22 an ongoing facilitated risk management and
 23 safety management system program, and that's
 24 called the aviation safety network, and it's
 25 interesting that that actually started in the

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1 helicopter sector, but it's really broadened
 2 out, and just in the last six weeks, and that
 3 is a global program that is delivered in
 4 Canada, the US, and Australia, but just in the
 5 last six weeks the Civil Aviation Safety
 6 Authority in Australia have actually engaged
 7 us to adapt and roll out that program for 47
 8 percent of the Australian aviation industry,
 9 which incorporates over 12,000 aviators -- I'm
 10 sorry, 39,000 aviators and 12,000 aircraft.
 11 So it's really to give the support and the
 12 tools and the techniques and the ongoing
 13 mentoring and coaching to help implement this
 14 practice.
 15 ROIL, Q.C.:
 16 Q. Okay, I think that's a reasonable explanation
 17 of the sort of the backgrounds and the
 18 skillsets.
 19 MS. TURNER:
 20 A. And I must say, sorry, Mr. Roil, I do have a
 21 tendency of using the term "we" because I'm
 22 just one person that has so many hours in a
 23 day and a lot of our projects really do
 24 require a depth of expertise, particularly
 25 from an aviation perspective, that I don't

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1 have. I'm a risk expert and a process master,
 2 but certainly don't have the aviation
 3 experience of 20 years being a pilot or an air
 4 traffic controller, or an engineer, as such.
 5 And so the best skillset I found in our staff
 6 and our team members where they're risk
 7 professionals, but they also do have that
 8 aviation experience, and if we have a staff
 9 member such as myself that has a risk
 10 discipline, that's why in the communication,
 11 the consultation phase, it's really important
 12 to team with people that have that experience
 13 and they will extract that information and put
 14 it through the process.
 15 ROIL, Q.C.:
 16 Q. And those people would be available through
 17 you to our assignment?
 18 MS. TURNER:
 19 A. Yes, that's right.
 20 ROIL, Q.C.:
 21 Q. Good. The second thing is, and I think you
 22 may want to use one of your slides to talk
 23 about this in answering this question, but as
 24 I looked around the room and I thought about
 25 who our stakeholders are, and many, if not all

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1 of them, are certainly here as what we call
 2 parties with an interest, or with standing, I
 3 think, is the expression we've used, I didn't
 4 hear an awful lot in what you said about
 5 things like the training institutions, the
 6 providers of suits and other pieces of
 7 equipment and gear, because we have them with
 8 us, they've indicated an interest and they're
 9 here. So where would they fit in that risk
 10 profile wheel or whatever other tool you would
 11 like to use to explain that?

12 MS. TURNER:
 13 A. In the process. I might just flick to that
 14 slide. See if I can do this. Actually, I'll
 15 come back to that. Just to answer your
 16 question, with our stakeholder analysis that
 17 we undertake, I guess you've got a few
 18 different layers of stakeholders. You've got
 19 the clear obvious stakeholders that are the
 20 core group, such as the helicopter company and
 21 the petroleum organization. So they're very,
 22 very clear in that stake, but then if you just
 23 pull that ring out a little bit further and
 24 you start examining what organizations does it
 25 take to actually get this industry working,

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1 and the industry like the joint industry that
 2 we've defined today, and I would definitely
 3 see anyone that supplies equipment, training,
 4 has influence over the staff or an
 5 association, a group that has standards,
 6 really the stakeholders are unlimited in that.
 7 Now what we do when we identify the
 8 stakeholders, the first challenge is to make
 9 sure you haven't missed anybody out, and
 10 certainly as that process formulates, I'd love
 11 to get that confirmation from those involved
 12 to make sure that we haven't actually left
 13 anybody off there, but once we have that list
 14 of stakeholders, we go through and we ask the
 15 question, "What is their area of interest",
 16 and is it a communication or a consultation
 17 role they have in the risk management process.
 18 If it's a consultation role, there needs to be
 19 some level of interaction and engagement, be
 20 that discussion, dialogue, reviewing, sharing
 21 of information of systems. Now from a
 22 training or an equipment perspective, and you
 23 used the example of suits, that is a key part
 24 of the operation itself and needs to take
 25 place. Now in relation of where that would

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1 fit on the dial or the industry risk profile,
 2 the training aspects would fall under the
 3 organizational profile because training is
 4 generally contracted or mandated or defined by
 5 the operators themselves, be that helicopter
 6 or oil operators. So that would fit in there.
 7 In terms of equipment, it can fall into two
 8 places, depending on what type of equipment it
 9 is, either the aircraft capability profile if
 10 it's physical equipment that is used in and
 11 around for the safe operation of the aircraft,
 12 or if it's personal equipment, that would be
 13 picked up under the operator profile as well,
 14 or possibly under the passenger and
 15 participant profile when we look at that
 16 setup. So there is a good opportunity to
 17 connect those things in and the good news is
 18 we've already got those on our list of people
 19 that we'd love to sit down and talk with.

20 ROIL, Q.C.:
 21 Q. Okay, that clarifies those points for me.
 22 Thank you very much, Ms. Turner.

23 MS. TURNER:
 24 A. Thanks.

25 COMMISSIONER:

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1 Q. Now I'll go to our list of potential
 2 questioners, and you'll remember, of course,
 3 the caveat that I raised this morning. So we
 4 would start with counsel for C-NLOPB?

5 MS. CROSBIE:
 6 Q. We have no questions. Thank you very much.

7 COMMISSIONER:
 8 Q. Okay, thank you. Transport Canada.

9 MR. FREEMAN:
 10 Q. No questions. Thank you.

11 COMMISSIONER:
 12 Q. Thank you. Counsel for CAPP, Mr. Brown.

13 MR. BROWN:
 14 Q. No questions.

15 COMMISSIONER:
 16 Q. Thank you. Counsel for the operators, of
 17 which there will be three. Ms. Strickland.

18 MS. STRICKLAND:
 19 Q. No questions for each of these.

20 COMMISSIONER:
 21 Q. Thank you. Mr. Mahoney.

22 MR. MAHONEY:
 23 Q. No questions, Mr. Commissioner, for
 24 Suncor.

25 COMMISSIONER:

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<p>1 Q. Okay. Ms. Hickman.</p> <p>2 MS. HICKMAN:</p> <p>3 Q. Nothing, my lord, from Husky.</p> <p>4 COMMISSIONER:</p> <p>5 Q. Thank you. For Cougar.</p> <p>6 MR. COHEN:</p> <p>7 Q. Michael Cohen, for Norm Whalen, and we have no</p> <p>8 questions.</p> <p>9 COMMISSIONER:</p> <p>10 Q. Okay, thank you. Helly Hansen are not</p> <p>11 here today. Counsel for Memorial</p> <p>12 University.</p> <p>13 MS. KIMBERLEY TURNER - EXAMINATION BY DAVID HURLEY, Q.C.:</p> <p>14 HURLEY, Q.C.:</p> <p>15 Q. Kimberley, my name is David Hurley. I</p> <p>16 represent Memorial University, and in</p> <p>17 particular, the Marine Institute Centre for</p> <p>18 Offshore Safety and Survival, and as most of</p> <p>19 us know here, our centre trains the vast</p> <p>20 majority of workers in our offshore. Just to</p> <p>21 deal with one particular point, the training</p> <p>22 that is undertaken by the centre often</p> <p>23 involves risk because we do try to activate</p> <p>24 real life situations which would involve risk,</p> <p>25 and I guess it's often said that a balance</p>	<p>1 through training, and training in itself is --</p> <p>2 yes, it has its own risk, but I don't know of</p> <p>3 any activity in life that is free of all risk,</p> <p>4 and so there is that element. Training in</p> <p>5 itself is a risk treatment strategy in the</p> <p>6 even that it's needed, and certainly plays an</p> <p>7 important role in that. The point that goes</p> <p>8 to the training itself has risk, yes, it is,</p> <p>9 and certainly from a risk reward and a cost</p> <p>10 benefit analysis, it really just needs to be</p> <p>11 taken into account. You mentioned about</p> <p>12 getting the balance between the risk and</p> <p>13 achieving the objective or the reward in that</p> <p>14 case. Certainly if the objective is to have</p> <p>15 people that are familiar with the hazardous</p> <p>16 environment, that are comfortable and</p> <p>17 competent to respond with the right skills and</p> <p>18 techniques that are needed in the event that</p> <p>19 the training is needed, is extremely important</p> <p>20 and ultimately our goal is to -- our goal, and</p> <p>21 I say that globally, the goal of aviation</p> <p>22 safety is to keep the aircraft in the air, but</p> <p>23 in the event that those aircraft do ditch into</p> <p>24 water for whatever reason, then we need to</p> <p>25 activate, I guess, the contingency plan, which</p>
<p>Page 206</p> <p>1 must be found in ensuring that the risk of</p> <p>2 harm to the trainee or to the various workers</p> <p>3 is carefully controlled and monitored. Is</p> <p>4 that something that you're familiar with?</p> <p>5 MS. TURNER:</p> <p>6 A. Yes, I am.</p> <p>7 HURLEY, Q.C.:</p> <p>8 Q. And, I guess, following up on that point as</p> <p>9 well, I guess the consequence and times the</p> <p>10 frequency of the -- well, the potential of</p> <p>11 risk should be, I suppose, more often than the</p> <p>12 risk involving the training. Is that</p> <p>13 something that you are going to comment on? I</p> <p>14 know it's early in the game at the present</p> <p>15 time.</p> <p>16 MS. TURNER:</p> <p>17 A. I'm very happy to comment on that because it's</p> <p>18 an important point that in a high risk</p> <p>19 industry, such as the helicopter</p> <p>20 transportation in the offshore industry, it is</p> <p>21 high risk, and so the question is how do you</p> <p>22 prepare the passengers and crew to respond and</p> <p>23 be familiar with the risks associated with</p> <p>24 that environment, and one of the key ways of</p> <p>25 becoming familiar with the conditions is</p>	<p>Page 208</p> <p>1 is what happens if it happens, which is</p> <p>2 certainly where the helicopter underwater</p> <p>3 escape training comes into play with that. So</p> <p>4 you are correct in saying a balance needs to</p> <p>5 be achieved.</p> <p>6 HURLEY, Q.C.:</p> <p>7 Q. Uh-hm.</p> <p>8 MS. TURNER:</p> <p>9 A. And I'm sure, you know, if you have that</p> <p>10 approach, that those assessments are actually</p> <p>11 conducted in training.</p> <p>12 HURLEY, Q.C.:</p> <p>13 Q. And I think I've asked you before, did you</p> <p>14 intend to cover that in your report, these</p> <p>15 aspects of risk and training?</p> <p>16 MS. TURNER:</p> <p>17 A. Yes, the aspects of risks and training will be</p> <p>18 covered in the risk management process, and</p> <p>19 the opportunity for how that will be</p> <p>20 engineered or how that will come about is, as</p> <p>21 a key stakeholder when we sit down and have</p> <p>22 the dialogue and explore some of the things</p> <p>23 that you believe are issues, and we start</p> <p>24 looking at what information you've got</p> <p>25 available through the Institute, I really</p>

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<p>1 welcome that opportunity to sit down and put 2 that information into the process. So I do 3 confirm that those training aspects will be 4 covered, and in particular, with the activity 5 profile itself as we start to define that.</p> <p>6 HURLEY, Q.C.:</p> <p>7 Q. Thank you, Mr. Commissioner.</p> <p>8 COMMISSIONER:</p> <p>9 Q. Thank you, Mr. Hurley. Mr. Harris is not here 10 today. Counsel for CEP, Mr. Earle.</p> <p>11 MR. EARLE:</p> <p>12 Q. Yes, Mr. Commissioner, I have a few 13 questions.</p> <p>14 MS. KIMBERLEY TURNER - EXAMINATION BY RANDELL EARLE, 15 Q.C.:</p> <p>16 EARLE, Q.C.:</p> <p>17 Q. Good afternoon, Ms. Turner. I'm Randell Earle 18 and I represent the Communications Energy and 19 Paperworkers Union, Local 2121, and our 20 members are the unionized employees on the 21 Terra Nova FPSO and the Hibernia Platform, and 22 I think we're fairly confident to say that we 23 represent the majority of the passengers on 24 the helicopters going offshore. I have a few 25 matters that I'd like to get clarified with</p>	<p>1 activity, that really comes down to the 2 relative comparison to other industries of 3 where that sits. Now I did use the term "high 4 reliability organizations", and I'm not sure - 5 - are you familiar with that term?</p> <p>6 EARLE, Q.C.:</p> <p>7 Q. Yes, I'm familiar with it.</p> <p>8 MS. TURNER:</p> <p>9 A. Yeah. The high reliability organizations or 10 industries, for those that aren't aware, are 11 those industries where there's a low chance of 12 things going wrong, but if they do, they can 13 be catastrophic. So the nuclear industry, the 14 petroleum and oil industry, petrochemical 15 industry, et cetera, where there's a lot of 16 controls in place and a lot of systems and 17 processes, but if things do go wrong, 18 generally the results can be catastrophic.</p> <p>19 EARLE, Q.C.:</p> <p>20 Q. Yes.</p> <p>21 MS. TURNER:</p> <p>22 A. In that spot. So when I talk about high risk, 23 it's in the context of being a high 24 reliability organization or industry that have 25 those traits and characteristics.</p>
<p>Page 210</p> <p>1 you, and the first of them is actually one of 2 the last things you said.</p> <p>3 MS. TURNER:</p> <p>4 A. Uh-hm.</p> <p>5 EARLE, Q.C.:</p> <p>6 Q. Before the break, in your discussions with Mr. 7 Roil, and I don't have your verbatim. As a 8 matter of fact, I don't think there's anybody 9 who has your verbatim today.</p> <p>10 MS. TURNER:</p> <p>11 A. I caught you off guard, eh.</p> <p>12 EARLE, Q.C.:</p> <p>13 Q. I thought we folks spoke fast.</p> <p>14 MS. TURNER:</p> <p>15 A. Yeah, that's good.</p> <p>16 EARLE, Q.C.:</p> <p>17 Q. But you basically said the reliance on 18 helicopter transportation is a given in the 19 offshore industry, and that the people that I 20 represent make a decision when they go to work 21 in the offshore to accept the risk associated 22 with what you described as a high risk 23 activity. Have I got that right?</p> <p>24 MS. TURNER:</p> <p>25 A. That's correct, and in respect of a high risk</p>	<p>Page 212</p> <p>1 EARLE, Q.C.:</p> <p>2 Q. We know there's a -- there is this attempt to 3 be high reliability, but it comes to mind that 4 helicopter transportation in the offshore in 5 Newfoundland, for instance, has essentially 6 been conditioned on a couple of things on the 7 part of the passenger. One, the training to 8 which Mr. Hurley just referred you to, and 9 two, the immersion suit.</p> <p>10 MS. TURNER:</p> <p>11 A. Uh-hm.</p> <p>12 EARLE, Q.C.:</p> <p>13 Q. And you may or may not be aware at this point 14 in time that there have been a number of 15 complaints vis-a-vis the immersion suit, and 16 in particular, they don't fit some people, and 17 at this point in time there are, since the 18 accident which has triggered this, a number of 19 people who are working offshore who are going 20 back and forth by sea transportation because 21 they have not been able to have suits which 22 fit them, and I'm just wondering, in your 23 Terms of Reference, are you bound to 24 helicopter transportation to the point that if 25 the investigations were to determine that, in</p>

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1 fact, these immersion suits are not reliable,
 2 that you will be saying, well, we're still
 3 with helicopter transportation, but with an
 4 additional level of risk?
 5 MS. TURNER:
 6 A. There's a couple of things I'd like to comment
 7 on. In respect to our Terms of Reference,
 8 they're very clear in terms of looking at
 9 helicopter safety and the transportation via
 10 that mode of transport. So our Terms of
 11 Reference are defined to that boundary.
 12 However, in saying that, the industry risk
 13 profile does have touch points with that
 14 broader industry operating environment, and so
 15 if that environment actually does have sea
 16 transportation, that's clearly part of that
 17 whole setup and the environment there. So
 18 there may be an opportunity to consider -- in
 19 terms of is our brief to actually do a
 20 comparative assessment of the safety or the
 21 risk profile of one type of transport against
 22 the other; the answer is, no. So if you're
 23 looking for a comparative assessment that
 24 isn't currently within our Terms of Reference
 25 or our brief, but that piece of work could be

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1 undertaken as a specific task. I just wanted
 2 to make a comment on your last statement about
 3 if immersion suits are not reliable, would
 4 that be a means to change the mode of
 5 transport out there to the platforms. From a
 6 risk management perspective, the ultimate goal
 7 is, as I mentioned before, to prevent an
 8 aircraft from ditching, or from having a
 9 unscheduled landing, as it's often referred
 10 to, even on land. So does an immersion suit
 11 actually prevent an aircraft from crashing.
 12 The answer is no. An immersion suit is a risk
 13 treatment strategy in the event that unsafe
 14 act takes place and you need to respond to the
 15 water environment. So I just put that forward
 16 because it's a little bit like having -- I'm
 17 not sure if you're familiar with indoor rock
 18 climbing.
 19 EARLE, Q.C.:
 20 Q. Pardon?
 21 MS. TURNER:
 22 A. Are you familiar with indoor rock climbing?
 23 You strike me as that type of fellow that
 24 does. Okay. For those who maybe have
 25 teenagers out there, the outdoor adventure

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1 industry, you have people that go out and door
 2 rock climbing outdoors, but that industry has
 3 actually become --
 4 EARLE, Q.C.:
 5 Q. Excuse me, Wall-Nuts.
 6 MS. TURNER:
 7 A. Wall-Rocks, there you go. It's all about
 8 translation, isn't it, a language. Okay,
 9 Wall-Rocks. Okay, so the question is, or a
 10 statement, there's an example that we had
 11 visibility of where there was a court case,
 12 and I'll talk about liability in a second and
 13 a comment on that, but there was a court case
 14 where a young girl was climbing up the wall
 15 rocks and had a harness and had a carabiner,
 16 but she'd taken off her watch, just as I have
 17 here, and she clipped it onto her belt, and
 18 instead of actually clipping the carabiner
 19 onto her harness, she accidentally, because of
 20 an error, clipped it onto her watch, so that
 21 it was in the belt. So as she climbed up the
 22 wall rock and then sat back in her harness to
 23 actually belay back down, there was a safety
 24 event that occurred, and so she actually feel
 25 from a height and resulted in becoming a

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1 paraplegic because of that. Now the court
 2 case that came out of that actually had a
 3 mandate to the industry in that area that
 4 every indoor rock climbing gymnasium or wall
 5 rock setup needed to actually implement impact
 6 matting, and go out and put, you know, the
 7 sponge foam on the floors to minimize the
 8 consequence that if in the event that somebody
 9 fell, maybe they wouldn't sustain such a
 10 serious injury, that they would maybe have a
 11 broken leg or a twisted ankle as opposed to
 12 the severity. So in that case, that impact
 13 matting is very similar to immersion suits.
 14 It won't necessarily stop the person from
 15 falling or having the event, but in the event
 16 that that occurrence does take place, it
 17 minimizes the impact of the damage, and so
 18 when you're talking about suits maybe not
 19 performing to that specification or not being
 20 reliable, then that actually opens a range of
 21 other questions, which I'm sure will be
 22 explored through this process. So I just
 23 wanted to make that clear as to where a risk
 24 treatment strategy such as impact matting or
 25 an immersion suit actually fits in the risk

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1 continuum. So that would be my comment on
 2 that. Now in terms of the acceptance of risk
 3 and, you know, the liability, I think that's a
 4 discussion, you know, for a different -- a
 5 different time, but certainly in terms of all
 6 of these situations, the best outcome is to
 7 position everyone in the best way possible
 8 that; number one, could prevent an accident
 9 from happening; and then, number two, in the
 10 event that an accident does occur, that people
 11 have every reasonable resource at their
 12 disposal to actually help recover from that
 13 situation, or minimize the damage or the loss.

14 EARLE, Q.C.:

15 Q. I think we all understand that, Ms. Turner,
 16 but what I'm trying to understand is your
 17 brief, and are you saying that your brief is
 18 in terms of stopping the helicopter accident,
 19 and not in terms of the safety defenses, risk
 20 mitigators, whatever we want to call them, and
 21 we've heard them called a number of different
 22 things by different people?

23 MS. TURNER:

24 A. So just to reiterate what I stated before in
 25 terms of our Terms of Reference is to actually

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1 contain that to the safe operation of the
 2 aircraft. However, those defenses in terms of
 3 training and suits, I'll just reconfirm that I
 4 stated that is within the scope of that work.
 5 What is outside of our scope of work is a
 6 comparative assessment of different modes of
 7 transportation.

8 EARLE, Q.C.:

9 Q. Okay. Now you work with the offshore
 10 helicopter industry, right, your company?

11 MS. TURNER:

12 A. In what respect?

13 EARLE, Q.C.:

14 Q. Well, I saw your promotional material and I
 15 see that you promote yourselves as working
 16 with the offshore oil industry, correct?

17 MS. TURNER:

18 A. That is correct.

19 EARLE, Q.C.:

20 Q. And that you also promote, as one of your
 21 clients, CHC Helicopters, which is one of the
 22 largest providers of helicopter services to
 23 the offshore?

24 MS. TURNER:

25 A. That's correct.

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1 EARLE, Q.C.:

2 Q. Okay. In your presentation, slide 66, I
 3 presume it's part of 1C. It's the only one
 4 that doesn't have a block to the left. You
 5 have--I'm sorry, no, it is part of 1C. You
 6 said, under Offshore Helicopter Safety
 7 Inquiry, you have response to investigated
 8 phase and then risk profile, consultation and
 9 confirmation of agreed risk treatments
 10 measures. What do you mean by "risk
 11 treatments measures"?

12 MS. TURNER:

13 A. Okay. A risk treatment measure, as you
 14 mentioned before, there's different words that
 15 have been used interchangeably so far in the
 16 Inquiry, defences, solutions, risk mitigators,
 17 or in the language that I use from a risk
 18 vocabulary, risk treatment strategies or
 19 measures. So they would be any type of
 20 activity, task, function or activity that
 21 could be implemented to reduce an identified
 22 risk.

23 EARLE, Q.C.:

24 Q. Okay. So the next question is who are the
 25 parties who get to agree?

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1 MS. TURNER:

2 A. So going back to my comment in answering the
 3 last question was in terms of the context, we
 4 will confirm and establish a list of
 5 stakeholders. All of those are parties with
 6 interest to the Inquiry, are already on that
 7 list and certainly we've done some initial
 8 work around developing that list further and
 9 various players will have a different role.
 10 In terms of this term "agreed" that you pick
 11 up on, the aim of a risk management plan or a
 12 risk profile is not purely just to put forward
 13 the risks and the assessment of the risks, as
 14 I mentioned before. The aim is actually to
 15 put forward the risks, their priority, but
 16 then also to put some risk treatment
 17 strategies alongside those risks.

18 Now why have we selected the word
 19 "agreed"? Because ultimately, in order for
 20 these risk profiles to be effectively
 21 implemented, there needs to be some level of
 22 action that takes place. Now there's a couple
 23 of different ways that that could occur.
 24 Either it could be mandated and a decree could
 25 come on high and say you shall change this

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<p>1 practice or really harnessing the knowledge 2 base of the parties or the stakeholders 3 generally with the experience within the 4 industry, there will be, you know, a wealth of 5 innovation and different ideas of what could 6 be done to manage those risks. 7 EARLE, Q.C.: 8 Q. Ms. Turner, stakeholders, as a general 9 descriptive, I don't think there is a party in 10 this room who would not come within that term. 11 MS. TURNER: 12 A. Well, that's correct. 13 EARLE, Q.C.: 14 Q. So are we all going to be invited to agree? 15 MS. TURNER: 16 A. I think you'll all be invited to participate 17 and if agreement can be facilitated, that's 18 the best outcome. Now if agreement can't be 19 internally facilitated, well then that's where 20 I guess some level of consideration needs to 21 be made about where that line in the sand 22 works. So what I'd like to say is when you 23 have exposure to this process, there is a 24 great opportunity for you to participate and 25 provide input in a number of areas. Firstly,</p>	<p>1 treatment measures, and so it seems to me that 2 for you to say that when the draft profile is 3 out here and we all have a chance to react, if 4 you'll excuse my bluntness, the deal will have 5 been cut. 6 MS. TURNER: 7 A. Two points on that. Firstly, going back to 8 the risk management process diagram, you'll 9 note that we drew your attention to the arrows 10 that continually go around. It's not--I 11 disagree with your comment or your statement 12 that the deed would have been done, because it 13 is an iterative process and I would see that 14 the risk profile itself wouldn't be finalized 15 until phase two in that. So however, to get 16 consultation and confirmation of those 17 treatment strategies that can be agreed and 18 that's actually very straightforward for us to 19 indicate in a draft profile, in terms of the 20 level of consultation. It may be, and it's 21 not uncommon for these industry profiles to 22 have 40, 50, 60, 80 percent of the treatment 23 strategies already agreed by the parties who 24 would be responsible for implementing. And 25 so, that's the second part of my response I</p>
<p>Page 222</p> <p>1 is your contribution to helping define the 2 context. Secondly is in the information 3 provided that will be used in the risk 4 identification stage and thirdly is once those 5 risks have been developed is actually to have 6 some level of contribution to the risk 7 treatment strategies, the solutions that would 8 be put in place to reduce those risks. 9 Now I've taken that one step further 10 because I do believe that throughout this 11 process, and in Phase 1C, when information on 12 the draft profile is consulted with all of you 13 in the room and other stakeholders that may 14 not be in the room, I think you'll actually be 15 pleasantly surprised that generally the 16 majority of solutions would be a given or 17 would be readily agreed. There'll be some 18 areas that might require some level of debate 19 or some level of fleshing out, but that again 20 is actually part of the risk management 21 process. 22 EARLE, Q.C.: 23 Q. Ms. Turner, the point though is clearly that 24 the draft profile is, at least in your slide 25 66, chronologically after the agreed risk</p>	<p>Page 224</p> <p>1 was going to put forward is that each risk 2 treatment strategy requires an owner, requires 3 resourcing and requires implementation, and so 4 I believe that that's where there'll be a lot 5 of dialogue about, you know, how does that 6 take place. Some things will become very 7 clear and will be very apparent and will fall 8 into different stakeholders area of 9 responsibility. Some may require multiple 10 stakeholders to contribute to the 11 implementation of a certain solution, and so 12 until we get to that point, I would encourage 13 you to keep an open mind and certainly not 14 walk into this process thinking that the deed 15 would have been done, because in terms of how 16 this process will be facilitated, it will be 17 very interactive. There is an opportunity to 18 be part of the process, review the draft 19 process. There won't be any surprises in this 20 because really for a risk profile to be 21 effective and useful, it really does need to 22 have that engagement and that interaction. 23 EARLE, Q.C.: 24 Q. Ms. Turner, 37 years at my profession have 25 made me a tad sceptical and it has served my</p>

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1 clients well from time to time.
 2 MS. TURNER:
 3 A. Well, I look forward to working with you on
 4 this one because the -
 5 EARLE, Q.C.:
 6 Q. No, no, that's not a question yet.
 7 MS. TURNER:
 8 A. It wasn't a question, well, I'll make a
 9 comment anyway, but -
 10 EARLE, Q.C.:
 11 Q. Why don't you wait for the rest of the
 12 question?
 13 MS. TURNER:
 14 A. Okay.
 15 EARLE, Q.C.:
 16 Q. The rest of the question is, it's early days
 17 yet.
 18 MS. TURNER:
 19 A. Yes.
 20 EARLE, Q.C.:
 21 Q. And you're asking me and my clients to believe
 22 -
 23 MS. TURNER:
 24 A. I know.
 25 EARLE, Q.C.:

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1 Q. - but the question, and it's a very serious
 2 question, is when in the process are we going
 3 to see some clarification and delineation of
 4 the opportunity for the passengers -
 5 MS. TURNER:
 6 A. Um-hm.
 7 EARLE, Q.C.:
 8 Q. - who are unlike any other passengers. They
 9 don't buy a ticket.
 10 MS. TURNER:
 11 A. I know.
 12 EARLE, Q.C.:
 13 Q. They report for work.
 14 MS. TURNER:
 15 A. Yeah.
 16 EARLE, Q.C.:
 17 Q. The passengers to have their input, when are
 18 we going to see some clarification and
 19 definition on that opportunity?
 20 MS. TURNER:
 21 A. On that opportunity. Well, I can give you my
 22 undertaking that that opportunity will be part
 23 of Phase 1B and the development of the
 24 industry risk profile in consultation with the
 25 industry and those passengers, as you say, the

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1 workers that get in the back of the aircraft
 2 and go to work on a daily basis are key to
 3 that part and in particular, they're key
 4 because the comfort level and the tolerance of
 5 their real or perceived risk and their comfort
 6 level of flying in aircraft is extremely
 7 important in where we put the criteria of how
 8 much is enough. So building that confidence,
 9 or in this case, potentially restoring
 10 confidence, or as you alluded to before, maybe
 11 looking for alternate treatment strategies
 12 that achieve the same aim of getting them
 13 safely to work maybe through another vehicle
 14 could be a potential treatment strategy, and
 15 as we work through the process, I do look
 16 forward to working this through with you,
 17 because it's a matter of listening to the
 18 concerns of the stakeholders, and in your area
 19 of interest, the passengers that get in the
 20 back of the aircraft, being receptive to their
 21 issues, taking them on board and inputting
 22 them into the process and then plotting those
 23 issues, whether they're an issue, a cause, a
 24 consequence or a solution and actually using
 25 the risk management process to legitimately

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1 and in a very deliberate way, address those
 2 concerns and ensure that they're put forward.
 3 Now just going back to your comment about
 4 I'm asking you to believe through this process
 5 and to give this process a go, I don't say
 6 that lightly, and certainly working with
 7 organizations right around the world,
 8 including as late as last week, I was working
 9 with the US Air Force with their search and
 10 rescue combat capability with their senior
 11 command group, and they've been operating for
 12 a lot longer than 37 years in a high risk
 13 industry, in a certain way and certainly
 14 within a very short period of being introduced
 15 to this process, they saw that it could give
 16 them an added dimension of what they hadn't
 17 had in the past to help build confidence of an
 18 area that they were looking for. So I mean, I
 19 have learnt to trust this process because I've
 20 seen its repetitive delivery.
 21 I know for industries or organizations
 22 such as those represented in the room, they
 23 may or may not have had exposure to this level
 24 of risk profiling, but if the process is
 25 undertaken correctly and in a suitable,

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1 sensible way, it will actually give
 2 clarification to the issues with a sensible
 3 path about matching the right treatment
 4 strategies to the right risks, and I look
 5 forward to being involved with you on that
 6 process and give you my personal undertaking
 7 that certainly the views, perceptions,
 8 concerns of the workers is very, very key to
 9 this whole project and that passenger and
 10 participant profile element of the IRP model
 11 is where that will be presented in its own
 12 right.
 13 EARLE, Q.C.:
 14 Q. Ms. Turner, in your pyramid for the safety
 15 management system -
 16 MS. TURNER:
 17 A. Um-hm.
 18 EARLE, Q.C.:
 19 Q. - where do you see--and before I ask that
 20 question, let me ask you this.
 21 MS. TURNER:
 22 A. Yes.
 23 EARLE, Q.C.:
 24 Q. I take it you see the safety management system
 25 as the continuing, if you will, living

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1 mechanism by which safety is assured, so that
 2 we are not in a situation where we do a risk
 3 profile, we agree on a whole measure--list of
 4 measures. We go to those and as the world
 5 changes, we stay static.
 6 MS. TURNER:
 7 A. Yes.
 8 EARLE, Q.C.:
 9 Q. And lo and behold, we're in as much problem as
 10 we were at the beginning of the exercise. Am
 11 I correct in that, that's how you see -
 12 MS. TURNER:
 13 A. Yes.
 14 EARLE, Q.C.:
 15 Q. - the safety management system? So could you
 16 tell me, where in that pyramid, and maybe I
 17 don't know, flip back and get the slide
 18 number. Unfortunately, it doesn't have a
 19 slide number on it, but it's after 60.
 20 ROIL, Q.C.:
 21 Q. She has it.
 22 EARLE, Q.C.:
 23 Q. Oh, got it up. Where in that pyramid do you
 24 see the interaction of the current existing
 25 systems like employer-employee occupational

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1 health and safety committees, given that
 2 people go to work the moment they report to
 3 the heliport? Where do you see that kind of
 4 involvement of employees fitting into that
 5 pyramid?
 6 MS. TURNER:
 7 A. Sure. There's two different aspects to my
 8 answer. Firstly is you recall that I spoke
 9 about the alignment and the need to connect
 10 the various regimes and integrate the various
 11 practices to get an effective safety
 12 management system from the perspective that
 13 we're considering. You reference OHS
 14 committees or occupational health and safety
 15 OSHC committees that would identify issues and
 16 I'm sure there's aviation things discussed in
 17 that workplace safety environment. My
 18 question would be does that--and there's an
 19 opportunity for us to explore this as we start
 20 to work together in Phase--at the end of Phase
 21 1A and into 1B. Does that information
 22 formally make its way to the right aviation
 23 stakeholder or does it actually remain within
 24 the organization that owns or runs that OSHC
 25 committee? And so this really lends itself to

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1 for the helicopter provider not just to have a
 2 safety management system for their workers and
 3 for their aircraft, but to have an integrated
 4 safety management system that integrates with
 5 their client base, which explores those type
 6 of things that you refer to there. So that
 7 would be my first answer to the question.
 8 The second, in relationship to this
 9 specific model, the staff that are passengers
 10 that get in the aircraft would fit into this
 11 model in the same place that the pilots or the
 12 other people involved in this whole set up
 13 would fit. It would be defined under the
 14 safety responsibilities so that there would be
 15 a specific role defined, so it's clear for
 16 all, and also in all of those other elements,
 17 I would expect a level of connectivity and
 18 integration. That example I used before with
 19 the occupational health and safety committee,
 20 if there's hazards and issues and risks being
 21 brought up in that forum and there's hazards
 22 and issues and risks being brought up in the
 23 same safety committee forum of the helicopter
 24 operator, but those systems don't talk to each
 25 other, we're probably doing ourselves a

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1 disservice, and so really in terms of trying
 2 to integrate, it's not that neither one of
 3 those organizations would not have an incident
 4 reporting system or a committee to monitor,
 5 it's actually how do we get that connectivity
 6 between the two so that we've got the right
 7 information moving to both, and so that's
 8 really what we're talking about is an
 9 integrated approach to the safety management
 10 system, and we're integrating a few different
 11 things. We're integrating an aviation regime
 12 with an oil regime. We're also integrating
 13 different organizations that use the one
 14 aviation contractor, so different operators as
 15 such. We're also integrating aviation
 16 practice with other practices as well. So
 17 there's different levels and tiers of
 18 integration and I look forward to exploring
 19 some of that or all of that with the
 20 stakeholders and that may be something that
 21 will come out on the risk profile, if there's
 22 enough information to support that.
 23 EARLE, Q.C.:
 24 Q. Yes, but in the operation of a safety
 25 management system, would I be correct in

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1 saying that that discussion between the
 2 occupational health and safety committee of -
 3 MS. TURNER:
 4 A. Yes.
 5 EARLE, Q.C.:
 6 Q. - that focuses the passengers' energies and
 7 the safety mechanisms of the aviation provider
 8 would be at the safety planning level?
 9 MS. TURNER:
 10 A. It could sit at the safety planning level,
 11 yes. It would also sit within the safety
 12 assurance regime to have confidence that that
 13 connection takes place. It would also sit
 14 within the operational risk management area
 15 where you're looking at a specific task
 16 profile. You used the example where a staff
 17 member would turn up after their shift and
 18 would actually go out to the base and board an
 19 aircraft, board the helicopter and the
 20 associated sequences that go with that. That
 21 full task sequence from turning up at the
 22 airport through to doing your checks through
 23 to go through security, through to getting
 24 your passenger briefing, through to loading
 25 the aircraft, flying at, landing on the

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1 helipad out there, would all be considered and
 2 mapped out in that operational risk profiling
 3 that would take place. And so you can see
 4 that even in that task sequence, we actually
 5 change and flip in terms of the responsibility
 6 of who does what, which again gives credence
 7 to the fact that having an integrated approach
 8 to your safety management system is paramount.
 9 EARLE, Q.C.:
 10 Q. Now, you talked about the safety management
 11 system as being a process that is an
 12 alternative to a prescriptive system.
 13 MS. TURNER:
 14 A. Uh-hm.
 15 EARLE, Q.C.:
 16 Q. And would I be correct in saying that one of
 17 the perceived advantages of a safety
 18 management system over a prescriptive system
 19 is that the problem with prescriptive systems
 20 is the minimum standard tends to become the
 21 ceiling?
 22 MS. TURNER:
 23 A. I think that is a fair assessment and in a
 24 prescriptive set up, what level of guarantee
 25 do you have that everything is being covered.

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1 EARLE, Q.C.:
 2 Q. That's right, and the notion of the safety
 3 management system is that it, if you will,
 4 continually challenges the standard on the one
 5 part.
 6 MS. TURNER:
 7 A. Yes.
 8 EARLE, Q.C.:
 9 Q. That's the one benefit, and the second
 10 benefit, as I understand it of safety
 11 management systems, is that they avoid the
 12 regulatory lag that is inherent in
 13 prescriptive systems, is that correct?
 14 MS. TURNER:
 15 A. Yes, I would agree that both of those
 16 statements that you've just made are correct
 17 and it's interesting from a regulatory
 18 perspective there are helicopter companies in
 19 Canada at the moment that do not have a
 20 regulatory requirement to have a safety
 21 management system; yet for the last two years
 22 they have committed to setting this process up
 23 to, as you say, avoid the regulatory lag
 24 because there's benefits in applying that
 25 safety management system that they're after

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1 that they really want to harness for their
2 organization.

3 EARLE, Q.C.:

4 Q. One last question and it's a question I think
5 that's in the minds of all of us here and I
6 would like you to try and be as clear on this
7 one as possible. When it comes to the notion
8 of tolerable risk, within an organization
9 where does the buck stop?

10 MS. TURNER:

11 A. Where does the buck stop within an
12 organization? The clear clearest answer I can
13 give is the buck stops at the top.

14 EARLE, Q.C.:

15 Q. Thank you.

16 MS. TURNER:

17 A. Thanks.

18 COMMISSIONER:

19 Q. Yes, Mr. Whalen, before you start, Mr. Earle,
20 I listened to your questions and I understand
21 where you're coming from and I do want to
22 assure you that I have said right from the
23 beginning that this is a collaborative
24 process. I want to hear from these passengers
25 and any that you bring forward will be heard

1 Q. Thank you, Mr. Commissioner. Good afternoon,
2 Ms. Turner, I'm Jamie Martin, I represent the
3 families of several of the deceased
4 passengers. A lot of--Mr. Earle was very
5 thorough in his examination of you and
6 certainly touched on many of the issues that I
7 was going to touch on, so I really only have
8 one point of clarification.

9 MS. TURNER:

10 A. Sure.

11 MR. MARTIN:

12 Q. And it was in relation to a question that Mr.
13 Roil put to you towards the end of it and he
14 asked you about the, a number of scenarios and
15 the risks taken by various people and in
16 particular, you know, as a legal
17 representative of the deceased passengers,
18 that's the group that I would like to focus on
19 for a moment. In your testimony you indicated
20 that there's a move within industry to set up,
21 I think--and I may have gotten the terminology
22 wrong, joint crew resources manager, is that
23 correct?

24 MS. TURNER:

25 A. Yes, crew resource management. It's often

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1 and I know that you represent about 60
2 percent, I think, are you clients, there are
3 others. I will make sure that everyone who
4 uses these helicopters can have a chance to
5 have input. It's most important to me to do
6 that and it will be done and the input will go
7 into the totality of the whole process and I
8 hesitate to use this example, but of course,
9 "it ain't over until the fat lady sings" and
10 I'm not referring to Ms. Turner.

11 MS. TURNER:

12 A. Thank you Commissioner, thank you.

13 EARLE, Q.C.:

14 Q. We appreciate your sentiments as we are very
15 aware of the organizational challenge of
16 integrating the view of the passenger and what
17 the passenger has to say into this whole
18 process and not only this process, the process
19 that will hopefully come out of it.

20 COMMISSIONER:

21 Q. Thank you, but I can assure you, I will not
22 let go of the concept which I've embraced, so
23 we'll see where it leads. Okay, Mr. Martin.

24 MS. KIMBERLEY TURNER, EXAMINATION BY MR. JAMIE MARTIN

25 MR. MARTIN:

1 referred to as CRM, crew resource management.

2 MR. MARTIN:

3 Q. And is that a move that's in the industry
4 worldwide to your knowledge?

5 MS. TURNER:

6 A. It is. The genesis of crew resource
7 management was really instigated about 30
8 years ago in the airline industry and it was
9 all about getting communication, it originally
10 started with pilots, pilot to pilot, captain
11 to co-pilot, but then I think we're now up to--
12 I'll confirm this for the record, but I'm
13 confident that we're up to the 6th or 7th
14 generation of crew resource management, so
15 it's very interesting over the last 30 years
16 to watch this discipline develop. It went
17 from pilot to pilot and then it went from
18 pilot to those stakeholders outside the
19 cockpit, air traffic controllers that had a
20 stake, and then it subsequently developed into
21 then the interaction between people and
22 machines, the aircraft with the introduction
23 of technology and glass cockpits, instead of
24 analogue and then really where we've seen it
25 move in the last ten years has been really

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1 getting into error and threat management. Now
 2 when we're looking at error and threat
 3 management, the idea is that everyone that has
 4 visibility of the hazards that surrounds the
 5 aircraft is a valuable player in actually
 6 contributing to that information source and
 7 the knowledge base of what's going on. So
 8 when you have other participants in the
 9 aircraft, and in this case we're calling them
 10 passengers, but really they're regular
 11 travellers that are doing the same trip day
 12 and day out, that would be fairly familiar and
 13 in some cases comfortable with how a
 14 helicopter operates. So where you've got
 15 these joint environments where we have
 16 passengers or participants or in some case
 17 they're referred as crew or non air crew, so
 18 they're not pilots but people that are
 19 involved with the aircraft operation, there is
 20 a need--and I wrote down some notes and I'm
 21 please you've asked this, about what would
 22 that CRM or that crew resource management
 23 training actually entail and basically what it
 24 is, it's training around the awareness of the
 25 risks and the hazards to the aviation

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1 environment. So what is normal, what is
 2 expected? If it's bad weather and there's
 3 fog, where's the boundary? Do I have the
 4 knowledge base to be able to recognize that as
 5 a passenger or is it the decision is made and
 6 I just assume that it's okay, you know, where
 7 does that sit. So, you know, the aim of crew
 8 resource management is to get people more
 9 involved in the information gathering around
 10 the hazards and threats and then if there is a
 11 variation from the normal, that people are
 12 comfortable to then interact and communicate
 13 with the right protocols and the right
 14 language set to actually raise those concerns
 15 and have them heard.
 16 MR. MARTIN:
 17 Q. So to your knowledge, are these concerns
 18 formalized through, say Occupational Health
 19 and Safety committees or other committees that
 20 might be set up within the operator's mandate
 21 or what's your understanding of that?
 22 MS. TURNER:
 23 A. Yeah, I'll give you an example of the
 24 powerline company that I mentioned before.
 25 They contract aviation contract, helicopter

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1 provides to do surveillance of their
 2 powerlines and the employees of the powerline
 3 company get in the back of aircrafts, some
 4 just to be ferried from A to B and back to A,
 5 others who actually do more task specific
 6 roles, like inspection of powerlines. Now
 7 from a contract management perspective, that
 8 organization has opted to place in a contract
 9 with the helicopter provider that crew
 10 resource management training is to be provided
 11 for the powerline industry staff. Now that
 12 CRM training consists of helicopter safety
 13 awareness, hazard and risk awareness and how
 14 to actually actively contribute or participate
 15 within the communication of aviation hazards
 16 if they become apparent during flight. So
 17 just going back to your question about does
 18 this fit within the Occupational Health and
 19 Safety structure, it could fit there, but the
 20 CRM is really classroom and scenario base
 21 training to get people familiar with hazards
 22 and risks that they could experience in the
 23 aircraft. So it's a real practical
 24 operational skillbase and there's tools and
 25 techniques as to how to even speak up in an

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1 aircraft and I don't know about you, but
 2 certainly I see myself as a fairly assertive
 3 person, but there are circumstances where I
 4 may be, say on an airline, where I see some
 5 thing that I don't feel comfortable with, that
 6 I think, well they should know about it, I
 7 think the pilot should know and I wouldn't
 8 necessarily speak up and say anything. And
 9 there's been various case studies where even
 10 in the airline industry passengers have seen
 11 things from their perspective, haven't said
 12 anything and the crew haven't necessarily been
 13 aware of it because of the situation of
 14 awareness, the task overload that often
 15 happens and a sensory breakdown from a
 16 physiological and psychological perspective
 17 when you're dealing with that, you know,
 18 pressure of the abnormal when it occurs in an
 19 aircraft. So there are really good benefits
 20 to the crew resource management and there is
 21 nothing stopping an operator or an oil company
 22 requiring that or requesting that level of
 23 training for their people, or putting it, now
 24 is it a requirement for--is it a regulatory
 25 requirement from an aviation perspective. For

<p style="text-align: right;">Page 245</p> <p>1 passengers, no, it's not; for air crew, there 2 is--there are a range of different 3 requirements be those advisory circulars all 4 the way through to regulations that actually 5 do drive towards the mandation of this type of 6 work--sorry, this type of training. It's 7 fairly normal in the aviation industry for 8 pilots to undergo CRM training, occurency 9 training every two years.</p> <p>10 MR. MARTIN: 11 Q. Is that an area that you're going to explore 12 as part of the Terms of Reference of this 13 Commission? 14 MS. TURNER: 15 A. Yeah, those areas of training, as I mentioned 16 before are well within the Terms of Reference 17 and as we do the stakeholder analysis, and in 18 particular Mr. Earle's comments around the 19 participant profile or the passenger profile, 20 when we start examining and unpacking that 21 would be what knowledge awareness skillset do 22 the participants actually need or would it be 23 good for them to have that greater level of 24 situational awareness of helicopter safety and 25 helicopter operations. So yeah, I do look</p>	<p style="text-align: right;">Page 247</p> <p>1 Q. Yes, absolutely. 2 MS. O'BRIEN: 3 Q. Mr. Roil has just asked me if I'd rather 4 question now or tomorrow morning. I do have a 5 couple of questions, I expect to be ten 6 minutes or so, as much as one can estimate 7 these things and I'm perfectly happy to do 8 what you direct me to. 9 COMMISSIONER: 10 Q. Perhaps, because we don't know and in line of 11 what I said earlier, you know, other people 12 may have some questions after, you know, the 13 evening and reflecting on it, so I think it 14 would be appropriate to come back tomorrow 15 morning and finish off and I think there's 16 another announcement Ms. Fagan would like to 17 make tomorrow morning or would you rather - 18 MS. FAGAN: 19 Q. Tomorrow morning. 20 COMMISSIONER: 21 Q. Tomorrow morning to do with events on Thursday 22 which would be of interest to people and also 23 to the public. So all right then, we'll 24 adjourn now until 9:30 tomorrow morning.</p>
<p style="text-align: right;">Page 246</p> <p>1 forward to exploring this further and you can 2 see in the aviation industry there's many, 3 many disciplines that have developed over the 4 last 30 to 40 years as a result of lessons 5 learned out of accidents and I guess trying to 6 get that balance between trying to identify 7 those areas that warrant that attention prior 8 to or without having an accident and then what 9 we could learn from an accident, this 10 experience, and really put that in place to 11 really help enhance the safety structures and 12 systems.</p> <p>13 MR. MARTIN: 14 Q. Okay, those are my questions. Thank you, Ms. 15 Turner. 16 MS. TURNER: 17 A. Thank you 18 COMMISSIONER: 19 Q. Thank you, Mr. Martin. Now, was there 20 anything, Mr. Roil, that you would like to ask 21 to--Oh, I'm sorry, I didn't see you behind the 22 monitor, Ms. O'Brien. 23 MS. O'BRIEN: 24 Q. I do have a couple of questions. 25 COMMISSIONER:</p>	<p style="text-align: right;">Page 248</p> <p>1 CERTIFICATE 2 We, the undersigned, do hereby certify that 3 the foregoing is a true and correct transcript of a 4 hearing heard on the 2nd day of November, 2009 at 5 Tara Place, 31 Peet Street, Suite 213, St. John's 6 Newfoundland and Labrador and was transcribed by us 7 to the best of our ability by means of a sound 8 apparatus. 9 Dated at St. John's, NL this 10 2nd day of November, 2009 11 Cindy Sooley 12 Discoveries Unlimited Inc. 13 Judy Moss 14 Discoveries Unlimited Inc.</p>

<p style="text-align: center;">-&-</p> <p>& [1] 13:19</p> <hr/> <p style="text-align: center;">---</p> <p>-I'll [1] 240:12</p> <hr/> <p style="text-align: center;">-1-</p> <p>1 [2] 27:22 90:4 1,450 [1] 15:21 10 [4] 66:3 86:2,8 91:5 10,000 [1] 112:19 100 [4] 102:12 106:10,17 176:2 100,000 [1] 14:22 109 [1] 27:24 12 [5] 28:13 103:14 107:6 120:25 131:9 12,000 [2] 199:9,10 1260 [1] 102:4 12th [2] 36:16 89:14 13 [2] 5:25 15:24 14 [4] 5:14 11:21 19:2 101:9 15 [3] 61:16 63:6 80:9 16 [1] 11:22 161 [1] 40:14 1995 [1] 43:10 1996 [1] 196:16 1997 [1] 5:24 1999-2000 [1] 147:21 1A [5] 13:4 54:25 55:9 182:7 231:21 1B [5] 55:16 56:7 182:10 226:23 231:21 1C [5] 182:18 183:12 219:3,5 222:11</p> <hr/> <p style="text-align: center;">-2-</p> <p>2 [1] 1:1 20 [6] 3:20 29:11 61:16 72:13 163:16 200:3 2001 [1] 147:25 2007 [1] 154:23 2009 [3] 1:1 248:4,10 210 [1] 11:21 2121 [1] 209:19 213 [1] 248:5 23 [1] 18:22 25 [2] 32:19 121:11 26 [1] 106:7 2:00 [1] 139:7 2nd [2] 248:4,10</p> <hr/> <p style="text-align: 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