OFFSHORE HELICOPTER SAFETY INQUIRY

November 3, 2009
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St. John's, NL

November 3, 2009

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COMMISSIONER:

Q. Good morning, ladies and gentlemen. Now, Ms. O'Brien, you were about to ask some questions, weren't you?

MS. O'BRIEN:

Q. Yes.

COMMISSIONER:

Q. Before you do, I'm told that Ms. Turner wanted to clarify a couple of things, so I'll ask her to do that now.

MS. TURNER:

A. Thank you, Commissioner, and good morning. One of the areas that we discussed yesterday very late in the question pace was this topic of crew resources management, and I just wanted to spend a minute or two just providing a little bit more information about that safety discipline within aviation and how it possibly could apply within the context of the passengers and the workforce that travel in the back of the aircraft. The definition around crew is fairly well defined and is very descriptive within the aviation regulations. So when we referred to crew, it really is the

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actual licensed crew, the pilots, or in the cases of some other sectors of aviation, licensed air crewman or observers that have a formal role within the aircraft. So one of the areas I wanted to clarify this morning was as a passenger, the terminology of crew resource management might not necessarily be the best fit. However, there has been an adaptation of CRM for those people who are involved in aircraft flying, but not necessarily with that formal role, and the term that's often used there is team resource management. So there's an acknowledgement that other people that may be in the aircraft could have a significant role to play if there's an identification of something abnormal or unusual or not familiar. The goal of this type of training, regardless of what it's called would remain exactly the same and ultimately if this application was to be considered for the passengers, it would really come down to the purposes to provide knowledge on aviation hazards, so that the passengers are very familiar with what is normal and what is not necessarily normal. One of the areas

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in risk management is really being able to identify where you may step outside the boundaries of those nominal or normal conditions, and those triggers of when it steps outside is really then a trigger to reassess from a risk assessment perspective. The real goal of applying these concepts and principles would be to empower the passengers that if they saw something or were uncomfortable with something, that they actually understood the right protocols as to how to raise that in the aircraft environment, and I just wanted to give you an example and we all have probably experienced travelling commercially and certainly I've got a lot of air miles and have a high exposure being a frequent flyer, but I was on a flight about three years ago and it was a 747 and it was a long haul flight overseas, and I was sitting there as a passenger and just in the overhead lighting there started to drip some orange liquid and it wasn't a big flow of liquid, but it was just this drip. I sat there as a passenger and I thought that doesn't seem right, and I had no technical knowledge of

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these aircraft, I wasn't a crew member, and certainly didn't have a formal role in the operation of the aircraft, but I was someone who had observed something that wasn't quite right, and certainly being a professional in the aviation safety and risk field, I probably know a lot more than others in terms of what is normal and what isn't, and I sat there and even I contemplated not saying anything, and after a while, you know, I was watching this for a little bit, I thought really I had this conviction that I needed to speak up and say something, and so I went and flagged down a flight attendant and came down and I said, look, excuse me, can you see that kind of liquid dripping, that orange liquid, it doesn't look right, and she said, oh, thanks for that, and then went away. Within about five minutes the aircraft captain, the pilot, was actually down sitting there in my aisle looking and examining what was going on. Now as it actually turns out, about three rows ahead of me somebody had a backpack and had some orange pop in their backpack and the lid wasn't turned on properly and it had actually

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run down the overhead baggage compartment and was dripping through. So I guess when you look at that situation, did I feel stupid? Really, no, I didn't, because in the case that might not have been orange pop and could have been something a bit more serious, I had the view or I had access to that information that maybe the pilot didn't have or the flight attendant didn't have. So the whole concept of crew resource management or team resource management in the application of people that aren't deemed as licensed crew members is really just to have that situational awareness around hazards and risks, what is normal and what is not normal, and to take it beyond just a gut feeling, or even if it is a gut feeling and something doesn't seem right, that you actually understand the right protocols in that aviation environment as to how to raise that issue and not have a fear of stupidity, and not feel that, you know, you're off beat, and that really comes down to that open culture and that just culture, the no blame culture, to really create the right environment where people feel comfortable and

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are empowered to speak up or say something. So there may be an opportunity to explore that further, but I just wanted to provide a few clarifying comments around CRM so that my statement yesterday wasn't misinterpreted or wasn't taken that I was implying that the passengers should be deemed crew and change their classification.

COMMISSIONER:

Q. Okay, thank you. I might say that we've all travelled by commercial airliner and there is an opportunity to do what you did, which I think was the right thing to do. Mind you, on the helicopters going offshore, you know, you have air protection on, you're in a suit, you're tightly strapped in. The noise is considerable. I think you'd have to think twice about getting -- there are no flight attendants. You'd have to think twice about getting out of your seat and going up to the pilots, not that you wouldn't do it if there was something very serious, but it wouldn't be quite the same as on a commercial airliner.

MS. TURNER:

A. That's right, and you're very correct in

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looking at the adaptation of these concepts and looking at the context of the S-92 in light of how many people are on board, the equipment, the suits, the noise, the environment, et cetera, but if these concepts were to be developed and made fit for purpose for that application, you could really design some protocols as to how you would flag. So it wouldn't necessarily be interrupting the pilot.

COMMISSIONER:

Q. No, but when you land or something like that.

MS. TURNER:

A. Or something, yeah, and it's really just -- for passengers that fly more often than every now and then, and certainly with the workers going backward and forward to the rigs, there is a higher level of familiarity with aviation practice and helicopter operations, and so it really just comes down to having the knowledge base and the information to be aware and have a good level of situational awareness. Now some people would actually just do that out of interest and some people really love helicopters and get all involved and

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understand the specs and everything around that, and other people may not necessarily self initiate that type of inquisition of knowledge. So there is potentially an opportunity or a concept, just as has been applied with the workers in the powerline industry, or the mining industry, or the firefighting industry, just to have a slightly greater level of awareness of the aviation norms, so to speak.

COMMISSIONER:

Q. I certainly agree with you, and one thing I have learnt since I've been involved in this, is that a lot of offshore workers have that kind of familiarity.

MS. TURNER:

A. Yes.

COMMISSIONER:

Q. With the system which you talk about, and I've heard it in conversation with them and also letters, and I'm sort of going through the points now that have been raised in the various letters that I've received, and I will speak to the group, not today, but later on.

MS. TURNER:

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A. That's good.
COMMISSIONER:
Q. About these -- the thoughts that have come through. Anyway, thank you, and thank you, Ms. O'Brien, for the, as it were, interruption in your questioning. So if you're ready.
MS. KIMBERLEY TURNER - EXAMINATION BY MS. KATE O'BRIEN:
MS. O'BRIEN:
Q. Good morning, Ms. Turner.
MS. TURNER:
A. Good morning.
MS. O'BRIEN:
Q. I'm Kate O'Brien, and I'm here today representing the family of the deceased pilot of the Sikorsky 92A crash, as well as I'm agent for counsel for the family of the deceased first officer of that flight. As I understood your testimony yesterday, you're really an expert who's been retained by the Commission to assist the Commissioner and this Inquiry in ultimately getting to its recommendations, right, and one of the things that the Commissioner has asked you to do is to prepare an industry risk profile and submit that to him?

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MS. TURNER:
A. Yes, that's correct.
MS. O'BRIEN:
Q. And just if I could break industry risk profile down to just one sentence, I understand it that that's going to ultimately be a document that's going to identify risks in the offshore helicopter transportation and will recommend or propose ways of reducing those risks?
MS. TURNER:
A. That's correct.
MS. O'BRIEN:
Q. And I understood yesterday that you talked about other IRPs or industry risk profiles you have done.
MS. TURNER:
A. Uh-hm.
MS. O'BRIEN:
Q. That the most -- the highest number of risks that you have ever identified is 26. So we're going to be looking at ultimately here in a ball park number of something in the range of 25 or less risks that you will ultimately identify?

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MS. TURNER:
A. Possibly. There's no limitation on that, but what you find with the industry risk profile is because it's a strategic view at the higher level, it doesn't necessarily break up into individual operational hazards, and so it really, you know, does compartmentalize quite nicely. So it'll be interesting to see exactly how many. The other thing that actually determines how many risks that you would put on the list is how far do you want to go. So do we only look at extreme and very high risks, or do we look at medium and lower risks, and normally on an industry risk profile, you would draw the criteria at the high basket. So to really look at the big ticket items. So if you were to move that threshold down, you could actually extend the list, or if you move the threshold up, you could actually shrink that list.
MS. O'BRIEN:
Q. Okay, I understand, but what I would like to do is try to give people a bit of a sense of, you know, what are we talking about here when we talk about risk. We know that ultimately

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you're going to come up with a certain number of risks.
MS. TURNER:
A. Yes.
MS. O'BRIEN:
Q. And I know -- I'm not asking you today to tell me what those risks are going to be, but I think people would like to have a little better idea of what exactly it is we're talking about here. For example, is a risk simply that a helicopter ditches and crashes, is that a risk, or is the risk that a part on that helicopter fails and as a result the helicopter crashes, or that there's a security breach and a passenger gets on that plane who, you know, commanders the flight and then we have a crash. I mean, can you give people watching some idea what it is you're looking at?
MS. TURNER:
A. Sure. Now just to use or reference those three examples that you just gave, because as you're talking I'm pigeonholing where you would actually plot that information back on the structure of the industry risk profile.

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In terms of an aircraft crash, so to speak, that's actually a consequence or an outcome of a pre-existing risk or a series of risks as we talked about yesterday. So on an industry risk profile, you wouldn't necessarily see the risk of a crash. What you would see is some of those process or structural things that may have failed that could potentially lead to the environment where that could occur. So the reason why I say that, and this is getting into some of the technical nuances of how you present risk information, it's really looking at the why things occurred, so -- and you start looking backwards. So ultimately the consequence or the event that we're trying to prevent is an accident, and so you would work back and say, well, why would an accident happen. So there's a range of different reasons why that would happen, and then in an industry risk profile we actually take it back another layer and say, well, why would those things happen, and sometimes you'll even go into the fourth or fifth or sixth level to really get to the root cause of some of these systematic issues, but in just going through,

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say, that example of a passenger had a security type issue, that would very much be that operational end. So I might just reference back to a couple of the slides so you can see how these concepts actually apply into practice. Okay, so say if we were to just look at this swiss cheese model. In terms of a passenger and there's a security breach and someone manages to get on the helicopter that may not be legitimate, or there might be a security incident in flight, that really is at that operational level because we're looking at the task of boarding an aircraft, flying out to a rig, and coming back. There are already defenses and barriers in place and fairly strong ones about passenger screening, ensuring that people are fit for travel, the actual metal machines, etc, the passenger brief, lining up, jumping on the aircraft. So one of the things that would be looked at at an operational risk level are, are there any vulnerabilities in that system, is there any chance that the process will fail and people aren't checked, or maybe they're not screened, or there's no

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process for actually counting passengers for getting on board. Now we all know and I'm sure we'll hear testimony over the next couple of weeks that those processes are very well defined, they're very structured, and, you know, they're in place, so those barriers would be there. At an industry risk profiling level, if issues did exist in those type of procedures, they would be put into the process, but it may not necessarily transpire into that event on the list, but we'd get into, well, why has that happened, why has that happened. So it's all about really understanding where the information fits. Now to go back to your original question of what type of risks could we anticipate in an industry risk profile, if you look at the structural model of the industry risk profile, this actually gives you some clues as to what types of things may be looked at. In terms of the system profile, and I'll start there, one of the areas may be examining the safety management system because the assumption is that an SMS actually does help you effectively manage your safety exposure and your hazards,

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and some of those examples we were just talking about in terms of security or in flight issues. So as we examine and we have some dialogue around that safety management system, maybe one of the issues that might come out is we have really good safety management systems, but do they actually integrate and connect appropriately, and if not, does that have the potential for information to be missed or maybe the right information to be moved around for the right decisions. So that's an example of a risk that could actually sit in that area.

MS. O'BRIEN:

Q. So just to interrupt you there, you're saying that one possible risk might be that there's - even though there's an SMS or safety management system in place, it's not being followed properly or it's not effective, so that's a risk?

MS. TURNER:

A. Not necessarily not being followed properly, but it's just does it actually have real utility outside the compliance base requirements to give more, and particularly as

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the environment changes.
MS. O'BRIEN:
Q. Okay. So looking at your industry risk profile wheel there.
MS. TURNER:
A. Uh-hm.
MS. O'BRIEN:
Q. How you talk about how the data is organized, can you give me an example of a risk that could come out of the operator profile?
MS. TURNER:
A. Yes, sure. In terms of the operator profile, yesterday the question was asked would that be the aviation operator or the oil company itself. My response was, well, let's examine both because both are levels of organization actually have a role to play. Now in terms of what areas are looked at there, we're really looking at the organizational risks. So going back to this swiss cheese model, it's coming up a layer to look at the organizational culture, the management structures, the processes that are in place for everything from running the business through to crew selection, through to training, all the way

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through to some of the practical oversight levels at an operational level. So as I mentioned yesterday, there's a number of components that sit under that. Some are very tangible and some are less tangible. So the tangible aspects are some of those processes; the less tangible may be the cultural aspects there as well.
MS. O'BRIEN:
Q. Okay, so I'm going to ask that question again because I just wanted you to give me -- I understand what kind of data falls under that category. You explained that yesterday and I did understand.
MS. TURNER:
A. Yes.
MS. O'BRIEN:
Q. But my question now is for you to give me an example of a risk that could be identified under that category?
MS. TURNER:
A. At this stage, it's a little bit premature for me to give an example because I wouldn't want that information to be taken out of context and implied that these risks exist in Cougar.

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I haven't had the opportunity to go out and work with the organization and have a look yet, so I'd just be speaking in a generic sense, and in terms of company level risks, there's a whole range of different things and each organization has a different flavour or a different bent of what's important there.
MS. O'BRIEN:
Q. I understand that, and like I said, it's not that I'm asking you now to come up with the results of your analysis today.
MS. TURNER:
A. Yes.
MS. O'BRIEN:
Q. But you have to appreciate that for people watching this Inquiry, the information that's been presented to date is extremely high level, there's lots of talk about risk management systems and safety management systems.
MS. TURNER:
A. Yes.
MS. O'BRIEN:
Q. And profiling, and objectives, and for people to really understand what all that talk is

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about some concrete examples would be, I think, extremely helpful for people's understanding, to make this Inquiry more meaningful to them, and so when I'm looking for examples, it's really -- it's not to pin you down now.
MS. TURNER:
A. No, of course.
MS. O'BRIEN:
Q. And it's not to sort of suggest to anyone that there's a particular problem with Cougar or anyone else. It's to give people who are watching some sort of example that they can kind of go, oh, yes, I get it.
MS. TURNER:
A. Yes.
MS. O'BRIEN:
Q. And I think that's sort of missing to date, for me at least.
MS. TURNER:
A. Well, I'll give you an example. Say, if an organization was going to expand their helicopter fleet. So they currently had three aircraft and now they're going to move to four or five aircraft. One example that would be

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picked up in an operator risk profile would be does the organization have formal processes, because at this industry level it is high level, as you referred to, it is strategic in nature, it's not the practical operational hazards that we would be generally comfortable with in terms of bad weather, and I'll talk about suits and things like that, and I'd like to come back to that, but in terms of, say, introducing a new aircraft type of expanding a fleet, what this operator profile would look at is does the organization have a formal approach to how that introduction would take place, do they have formal project management techniques, or is it just managed intuitively because, as we know, if you were to -- if you were to expand your organization by 25 percent, and all the change that goes with that, one of the areas at this operator level is wherever there's change, there's risk. Now this is not safety risk. It's actually organizational risk, and, I guess, when there's that turn and that change, what it can do is destabilize a situation or an organization and there's no certainty that it

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will do that, it's just the chance. So the risk management concept is actually working out could that happen; if it could, how much, I guess, disruption would take place, how long would that take place for, and would that actually have any operational impact. So going back to that example, if an organization was to increase their aircraft numbers, the type of thing that would be picked up would be looking at whether the organization had a process to manage those risks and what the risks were. Would it be that the biggest challenge would be that they can't necessarily recruit for more pilots because there's just not the employment pool to draw from, would it be that there's going to be a delay in actually getting pilots trained because there's a backlog in the simulator training and so, therefore, you know, do you run with or without it or will that delay and push it back for another six months. So really, as I said, you can dive into these risks and start to look at that and it really comes down to that context. So that would be an example there. Another good example --

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MS. O'BRIEN:

Q. Sorry, I'm just going to go back. Is your example -- is the example of an identified risk that there's not -- the process in place around adding new helicopters, or is the risk that the much more specific piece, well, there's not an adequate number of trained pilots in the employment pool?

MS. TURNER:

A. It would be both, and so just in my dialogue I probably gave three examples. So one would be the process.

MS. O'BRIEN:

Q. So that's three possible risks?

MS. TURNER:

A. Yeah, one would be not necessarily having a process. The other could be the recruitment of staff. The other could be the simulator training. So you could see that some are process orientated, and others are very specific. As is the case in the industry risk profile, you'll see the outcome and maybe if people are interested in having a look at an example, on the Flight Safety Foundation website, the helicopter medical industry in

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the USA released a report. That's the only industry risk profile that we've been involved in that has been publicly released. These documents are normally used by a regulator to help inform their oversight and how they provide their governance of the organization, and so when you read the industry risk profile, I must put a caveat on it, that it's actually not an easy read. It is a scientific document with risk information that is there at a high level. So to the reader, sometimes it might actually look like they're very high level issues that aren't tangible; however, from a regulatory perspective, those things actually are quite targeted and specific. Now as we work through this swiss cheese model, if we were to get into the operator risks and the operational risks, then you'll find that it actually becomes a lot more familiar to the reader who may or may not be involved in aviation.

MS. O'BRIEN:

Q. Okay. So once we have -- once you have developed an IRP, an industry risk profile, I understand you'll be giving that to the

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Commissioner, and I would assume that his recommendations coming out of this Inquiry may well include the recommendations given in the IRP as to how the identified risks could be minimized. I've got that right?

MS. TURNER:

A. Yeah, that process is right. I would just make one point, though, in terms of the use of recommendations. An industry risk profile doesn't make recommendations, and it doesn't actually make findings. So it's actually a process of analysis of data and what it does is it identifies issues and it provides proposed solutions or risk treatment strategies. So they're not --

MS. O'BRIEN:

Q. But it doesn't recommend them? It proposes solutions, but it doesn't recommend them?

MS. TURNER:

A. Well, in terms of a recommendation, it doesn't prioritize and give a recommendation. It gives a set of activities that could be implemented. Now if those aren't adopted, there's always alternate solutions that could be implemented to reduce the same risk.

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That's why we don't go down the path of recommendations. It's actually not within the risk process. Now yesterday in the question time, we talked about whether or not those proposed solutions could be collectively agreed in the drafting process, and that would be the intent, as it is the intent with every risk management plan or risk profile when it's developed, is to look at the practicality of implementation, to look at the accountability of who would roll them out, and to do that. So your comments are correct in terms of that information will be presented for consideration, yet it will not be the findings and the recommendations of the Inquiry.

MS. O'BRIEN:

Q. But it could form the basis of them?

MS. TURNER:

A. Yes, or it could inform that process, that's correct.

COMMISSIONER:

Q. If I might interrupt for one moment to perhaps set minds at rest, whatever comes to me from any consultant will be shared with everybody.

MS. O'BRIEN:

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Q. Okay.

COMMISSIONER:

Q. So that the group in this room and the public, for that matter, will have input and comment.

MS. O'BRIEN:

Q. Okay.

COMMISSIONER:

Q. So it won't be done in isolation from everybody else.

MS. O'BRIEN:

Q. Okay. I know, Ms. Turner, yesterday you had one slide and I don't have the slide number here, but it was entitled "IRP Methodology", and in it you -- there was a bullet there and it says, "Over 12 risk identification techniques used". Yes, that's it, you have it up.

MS. TURNER:

A. That's correct.

MS. O'BRIEN:

Q. And yesterday when you were testifying, you gave two examples of these risk identification techniques and one of them would be to review to transcripts of this Inquiry?

MS. TURNER:

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A. Yes.

MS. O'BRIEN:

Q. And another one was to have interviews with stakeholders. So I'm wondering now -- that's two out of 12. Can you maybe tell us what some of the other ones are?

MS. TURNER:

A. Sure. Some of the other risk identification techniques may be conducting an environmental scan on the industry to have a look at what's going on. The reason why you would use an environmental scan is, as I said before, wherever there's change, there's risk, but wherever there's risk, there's opportunity, so by doing an environmental scan, that actually helps you with these triggers of areas of change that can then be assessed from a risk perspective.

MS. O'BRIEN:

Q. What's an environmental scan?

MS. TURNER:

A. An environmental scan is, say, when you look at a whole industry and you look at what's going on, what's expected to change in the coming period. So, say, over the next three

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years in the offshore oil industry what's expected to happen; is it going to stay the same, or are we expecting new exploration, and basically the easiest way to think about risk management is to actually ask the question, what if, what if, what if, so what. So just applying it to an environmental scan, say in the next five years it looks like there was going to be three new areas of production start up. So we'd say what if that was the case, what if three new sites were actually going to start up, so what, so what does that mean to us, so what does that mean to helicopter operations, so what does that mean to the risk. It might mean that there'll be a need to increase the fleet size, it may be that there's a need to actually re-look at how the aviation operation takes place, it may be that there's a need for additional aviation providers, and then you'd ask the question again, so what, so what does that mean.

MS. O'BRIEN:

Q. Okay.

MS. TURNER:

A. So that's one technique.

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MS. O'BRIEN:

Q. Okay, and I'm going to ask you to go through some more, but you don't need to do all of them in that sort of detail.

MS. TURNER:

A. Sure.

MS. O'BRIEN:

Q. Of course, everyone is going to want to know what you mean when you use a term.

MS. TURNER:

A. That's right.

MS. O'BRIEN:

Q. But keep going, please.

MS. TURNER:

A. Yes, sure. Another risk identification technique might be to do a comparative analysis against better practice or good practice in other offshore oil industries overseas.

MS. O'BRIEN:

Q. Okay.

MS. TURNER:

A. So it might be to have a look at what's done here, have a look at what's done in the UK, and basically benchmark.

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MS. O'BRIEN:

Q. Okay, other ones?

MS. TURNER:

A. So another risk identification technique may be to do a causal factor analysis, so -- I know these are all the technical pieces of risk management, and yesterday when I showed the example, I actually said there's a depth of science that sits behind that, and this is where I go into kind of technical mode and start rattling off those various things, but in terms of a causal factor analysis, what you do with all of the data, you basically ask the question, what causes that to happen, and I guess we all, you know, would believe, or many of us would believe that prevention is better than cure.

MS. O'BRIEN:

Q. So when you're talking about data, causal factor analysis of data, are you talking about historical data of events that have already happened in our offshore?

MS. TURNER:

A. When I say data or information, it would be the collective information that we pool. So

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it might be documentation, it might be historical data of incidents or events, but it might actually just be information provided by the organizations about the issues that they continually looked at.

MS. O'BRIEN:

Q. Okay, that gives us four, I believe -- sorry, five.

MS. TURNER:

A. Four or five.

MS. O'BRIEN:

Q. That gives us five, I think, on my list.

MS. TURNER:

A. Sure. I'm just going through the various risk ID methods. So we've talked about documentation review. Actually, transcripts, so that's one aspect. Documentation review is actually -- or a literature review, they would actually be two different techniques. So a documentation review would actually be working with the organizations and then basically going through a lot of paperwork to have a look at the various systems, processes, structures, and issues that might exist. Another one might be a literature review. So,

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I guess, that's a fairly standard technique in research to then look at various papers or journals. Another risk ID method, and we alluded to this and spoke to it a little bit yesterday, is how you actually engage with the broader stakeholder group where there's a lot of people, and we know that the workforce is actually quite large that operates and uses these services. So, I guess, the question is what's the right technique to actually have that dialogue or to collect opinion or perception or information, and so, I guess, we just need to flush that out and look at what's realistic, but certainly having some touch points, whether or not that's a survey or whether or not it's a focus group, there's different methods there. Another risk identification technique is a thing called an RDA, or a risk dimensional analysis, and I apologize, you know, to some because this is really getting into some of the jargony risk management work, but with a risk dimension analysis what you do is you actually start with risk areas, such as environmental risk, safety risk, compliance risk, reputation risk,

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maybe the financial risk, and so you would start in those dimensions or categories of risk and you would start to examine those areas within the context of the profiling activity itself. So that's another one.

MS. O'BRIEN:

Q. Okay.

MS. TURNER:

A. So how many do we have there, Ms. O'Brien? I think we've got maybe eight or nine.

MS. O'BRIEN:

Q. Nine, yeah. Are there any other ones you think would be particularly relevant here?

MS. TURNER:

A. I think at this stage they're probably the ones that come to mind straight off the top, but certainly over the next three to four weeks, this is actually what we'll be defining and we've had some really good dialogue and some good planning sessions with counsel as to what's actually available, and I know that both Ms. Fagan and Mr. Roil have spent a lot of time, you know, out there with the various organizations talking with people, you know, site visits, walk-throughs, even all the way

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through to actually undertaking the HUET Training itself. So we'll just agree on those processes and be very happy to communicate and maybe there's an opportunity, Mr. Roil, for some of this to be put on the website at the right time so that people are aware of what's going on if appropriate.

MS. O'BRIEN:

Q. Okay, and I want to get back to something that you mentioned just then and you did say it yesterday, that one of the things that you do as you're analysing --

MS. TURNER:

A. Yes.

MS. O'BRIEN:

Q. Collecting the data and analysing, is you do look at historical data?

MS. TURNER:

A. That's right.

MS. O'BRIEN:

Q. Because even though I understand that the IRP is forward looking and takes that trajectory, looking ahead --

MS. TURNER:

A. Yes.

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MS. O'BRIEN:

Q. One of the pieces that you look at is what has happened in the past, right?

MS. TURNER:

A. That's right.

MS. O'BRIEN:

Q. Okay, and so one thing I'm wondering about here in this particular case, where we know that there is this TSB investigation going on --

MS. TURNER:

A. Yes.

MS. O'BRIEN:

Q. And a lot of the historical data has been taken by and is now under the control of the TSB.

MS. TURNER:

A. Yes.

MS. O'BRIEN:

Q. And so how do you effectively do the risk management piece that considers historical data when you do not have access to that data?

MS. TURNER:

A. Two answers to that question. On my last slide, I actually talked about with the risk

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profile revisiting the actual profile itself after the release of the TSB Report, and that was for that very reason, as you said, the TSB has access to information that we may not be able to access in this process, and so we'll come back around and actually revisit it there. The other part to my answer is in terms of historical data, we may actually go a little bit broader. Within the aviation industry, incident/accident data is actually widely available after the investigation process is complete. There's safety reports that are released by the equivalent to the TSB around the world, and as we all know, with this aircraft type and fleet, they're operated all around the world and there's various information there. So we'll do a search on what type of incidents or accidents have taken place, and we might do that in two different aspects. One is in the offshore oil industry, period, regardless of aircraft type, and one might be on the specific aircraft type or its variance of that, just to see if there's any lessons learned or any information that would be useful in the process.

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MS. O'BRIEN:

Q. So you'd be looking at data surrounding other perhaps S-92A incidents in Australia and other places like that?

MS. TURNER:

A. Yeah, and not just Australia, but I know I was speaking yesterday and actually looking and getting more information about where are the S-92s located around the world, and it's actually amazing, they're in many, many countries, and I won't quote the stats, but it actually surprised me that they were scattered all around the world. So it's not necessarily just in Australia. I think on the chart that I saw yesterday there was only one S-92 in Australia and there's six or so here in Canada, so in terms of volume and numbers you're really looking at global picture and the aviation industry is actually very broad, and I'm not sure if you aware or if the audience is aware, but there has been in the last four years a move to set up the International Helicopter Safety Team. Now the IHST is a global helicopter industry initiative. It's supported by the regulators

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around the world. It's interesting that the Chairman of the TSB actually addressed that forum in Montreal about a couple of weeks ago. Now what that actually attempts to do is look at compiling incident and accident data from all helicopter fleets from around the world, looking at it by country basis, but also by sectors, be that the offshore oil industry, the firefighting industry, air medical industry, et cetera, and possibly even by aircraft type as that process advances even more. So in terms of how we would access data of what's available, there's a great opportunity to tap into that network and ask the question and see what can be found.

MS. O'BRIEN:

Q. Okay, so if I can just recap your answer there, the concern -- my concern was that you wouldn't have access right away to historical data --

MS. TURNER:

A. Yes.

MS. O'BRIEN:

Q. That has been taken by the TSB. So you're saying, well, one, we will look at the TSB

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Report when we get it.

MS. TURNER:

A. That's correct.

MS. O'BRIEN:

Q. And sort of do another iteration of our loop to make -- to see if anything else needs to be added, and two, we will look at data beyond this particular industry here in Newfoundland and Labrador and look at data for other similar types of fleets and similar operations elsewhere in the world?

MS. TURNER:

A. That's right.

MS. O'BRIEN:

Q. So one of the things I understand is when you get the -- when the TSB releases their report, their report is really about one event?

MS. TURNER:

A. That's right.

MS. O'BRIEN:

Q. But yet I understand that the historical information that they have seized is much broader than one event, they just box up everything and take it.

MS. TURNER:

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A. Pack it up, yes.
MS. O'BRIEN:
Q. And then they decide what they need and what's relevant to their investigation of that particular incident. So one imagines that there is a huge amount of documentation that the TSB now has, you do not have access to, but yet will not figure in in any way to the TSBs ultimate report. So I'm wondering is in your --
MS. TURNER:
A. So how do we access that?
MS. O'BRIEN:
Q. As part of your procedure that you are going to get that other information, look at it, analyze it and see if there's anything of interest or importance there?
MS. TURNER:
A. Yes, sure. Could I ask a question in terms of the box of data that's been boxed up, and I'm familiar with the process of how that happens after an accident, what type of documentation are we talking about? Are we talking about internal company documentation?
MS. O'BRIEN:

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Q. I don't know, because we don't have it, but I understand that it's everything related to that operator, everything that they have related to those particular helicopters. They just -- they go in, they box it, they leave.
MS. TURNER:
A. So in terms of -- and why I was asking that question about what type of documentation, is if that's internal company documentation, at some stage it will be returned, and so, I guess, when we look at the TSB's outcomes or investigation report, and then go back to the primary sources of -- say, there's 100 documents that were impounded or collected and boxed up, and, say, maybe they only used 30 of those and there's another 70 documents; well, if we've got a list of those documents, then we can go back and look at whether or not we've already picked those up in literature reviews or the internal dialogue with the companies, and, I guess, this whole point is exactly why the level of interaction is really important in the industry risk profile because, I guess, you're moving down the path and if you don't have the right information,

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how could it be an accurate risk profile.
MS. O'BRIEN:
Q. Uh-hm.
MS. TURNER:
A. Is that your concern?
MS. O'BRIEN:
Q. That's my concern, yes.
MS. TURNER:
A. And so that's really where we have to have the exchange with the stakeholder groups and everybody in that and to really source that. Now one of the other aspects is the reason why we use 12 or more risk identification methods, and I used the example of interviews, yesterday I said we may interview 50 people, but that's just one risk identification technique. So it's actually quite comprehensive just in one of those methods. One of the reasons why we use 12 different techniques is because what you do is when you get the information, you start to layer it, and you stack -- what I call stack and rack. You basically stack it all up and then you're pulling out issues that are either worthy of note and are so significant that they'll stand

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on their own two feet, or the other type of issue will be those things that are repetitive, and we talked yesterday about the elephants and mosquitoes, but may not necessarily be high profile or really high risk. So that process of layering actually does give a level of integrity, and I can't guarantee that things won't be -- not missed, that's the wrong word, but if there's data input sources that are sole data input sources, and that's the only spot we can find that information, then as I said, we really would want to and would need to go back and find that source. If for some reason we can't access it, and it's just out of bounds, we'll note that as a limitation in IRP, and the impact of that limitation.
MS. O'BRIEN:
Q. Have you ever done an IRP before where there is concurrently an event investigation, an accident investigation, going on at the same time like we have here with the TSB?
MS. TURNER:
A. Yes. The most recent one is the helicopter medical industry in the United States. Now

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there was actually two layers of investigation going on. One was a public inquiry similar to this on the whole industry, and second to that was about three or four fatal accident investigation inquiry where the investigation process had not been complete. So that same issue about impounding documentation and that information, et cetera, was there. So in a couple of those examples, those reports were released before the IRP, and in others it was after the IRP.

MS. O'BRIEN:

Q. Okay, and then -- so I just want to have some, I suppose, assurance that --

MS. TURNER:

A. Yes, good use of assurance.

MS. O'BRIEN:

Q. That the documents that are eventually released from the TSB --

MS. TURNER:

A. Yes.

MS. O'BRIEN:

Q. Someone from this Inquiry, or you, as the expert, or someone is going to be having a look at those.

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MS. TURNER:

A. Yes.

MS. O'BRIEN:

Q. Not just at the TSB's ultimate report or finding, but the other documentation to find perhaps relevant, perhaps not, information there.

MS. TURNER:

A. Yes.

MS. O'BRIEN:

Q. That might assist in the risk analysis.

MS. TURNER:

A. Just on that point, I would concur with your request for that assurance, and I'm fairly confident that with the list of documentation that would have been impounded that there would be a list somewhere of those documents. So maybe if we can work on sourcing that list, I'd be very pleased to work through that and the information that we don't have access to, we'll endeavour to find that, as you say, and include that in the process.

MS. O'BRIEN:

Q. Okay. Now you talked a bit about how this is really a collaborative effort --

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MS. TURNER:

A. Uh-hm.

MS. O'BRIEN:

Q. And Mr. Commissioner just said that any information that he gets from experts or anyone else, he will be sharing with everyone.

MS. TURNER:

A. Yes.

MS. O'BRIEN:

Q. So I'm interested, in your interviewing process, in your -- you know, in this data collection phase or that risk identification piece, do you share the results of your interviews with one particular group with other interested parties? Is that information all shared?

MS. TURNER:

A. It is shared. There's a lot of information. So there's no restrictions on some of that. There is a process, though, of the identification because, obviously, in order for people to feel comfortable that they can put their concerns out there, sometimes people don't want that necessarily tagged with their name, but in our interview process, clearly we

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understand where it's come from, so we do actually compile results. So say, for instance, if we were to interview 10 people or 50 people, we would actually type up those notes in one big list and basically put it all together. There's no reason why that raw data, as I referred to it, can't be reviewed by the interested parties, unless somebody states that they don't want that released, but I haven't necessarily found that to be the case in our previous experience. People are generally willing to share that. I will say that sometimes people's concern is they don't necessarily want their name to be tagged to that, but you know, there's ways to ensure that people's confidentiality is protected, but the issues still get into the process.

MS. O'BRIEN:

Q. Okay. Actually, I have a number of questions to ask just on that piece. So for instance, as you go in and you're going to be interviewing Cougar, who's the air operator in this case.

MS. TURNER:

A. Yes.

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MS. O'BRIEN:
Q. Who would you interview at Cougar?
MS. TURNER:
A. Sure. In terms of just looking at it and talking about it now, I would probably start with senior management and talk with the CEO. I'd talk with the chief pilot, head of engineering, director of operations, and then really work our way down through the organization and then take a cross section--yesterday on the Risk Maker, Risk Taker DVD, Kevin Knight, the chairman of the Standards Committee, the ISO Standards Committee, talked about getting this slice section of the organization. So it might be that we have discussions with the crew on duty on the day or if the organization wants, there's no restrictions on everyone having input, if they'd like to go to that level of depth. And so from a professional risk compilation perspective, we actually do have a certain comfort level in terms of how deep you need to go within the organizations, and then it really comes down to if we feel that we need to speak with 15 people, but the organization

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would like us to speak with 50, then there's no restrictions there as well.
MS. O'BRIEN:
Q. Okay, and likewise, would you be interviewing people from Sikorsky?
MS. TURNER:
A. Sikorsky is definitely a stakeholder that's been identified on our list. I would endeavour to speak with people at Sikorsky. I know there's some, I guess, interesting boundaries in terms of the airworthiness of the jurisdictions of the TSB and Sikorsky, whether they would be open to that. I'm actually quite familiar and comfortable with the head of safety at Sikorsky. He was involved in the IHST. He's involved in various panels. So there are opportunities to talk with the manufacturing community on that, and I guess we just need to ensure that the Terms of Reference are--we work within the Terms of Reference and respect that there.
Now in terms of Sikorsky, with all manufacturers, whether it's Bell Helicopters, MD, Augusta Westland, Sikorsky, because their fleets are actually global, there is a lot of

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information that is released through airworthiness directives or safety alerts, et cetera. So that information can actually be fairly much openly sourced.
MS. O'BRIEN:
Q. Okay. So going back to who you'd be interviewing, say, at Cougar. Yesterday Mr. Roil picked a bunch of--picked a number of individuals, and he asked about, you know, what role did they play in the safety process.
MS. TURNER:
A. Yes.
MS. O'BRIEN:
Q. And one of them, of course, was a pilot, and you talked there about the pilot's role in terms of airmanship and reacting and whatnot.
MS. TURNER:
A. Yes.
MS. O'BRIEN:
Q. Very much at the operational level. I don't know if you explicitly said it, but I think we'd all be aware that another role that a pilot plays is in terms of reporting, monitoring accidents, incidents, near misses, and whatnot.

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MS. TURNER:
A. Yes.
MS. O'BRIEN:
Q. That's a very, very important role that flight crew play in safety management, and of course, there is somewhat of a conflict there for people who are employed in the industry and are--you know, part of their safety piece is self-reporting their own mistakes, perhaps their own deficiencies. So there's one concern there that the people whose livelihood depends on this job are, of course, going to be reluctant to report on their own -
MS. TURNER:
A. Shortcomings, possibly.
MS. O'BRIEN:
Q. - "look, I made a mistake today" or whatever, and so, you know, they're concerned about their job security in that way that they're not seen as incompetent or whatever.
MS. TURNER:
A. Yes.
MS. O'BRIEN:
Q. Plus there's the other piece that even when the incident that may be reported on is not

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something that could be laid at their feet, you talk about, you know, this just culture, this--you know, a corporate culture that encourages people to come forward and complain and that employees who do complain or, at the extreme level, whistle blow, are not ultimately face either some sort of overt or, in most cases, far less overt consequences in terms of how they go up the rank or what shifts they get offered and those kind of things. So I have concern there, how you handle that is one of the things you're going to be doing, I would assume, is interviewing flight crew and whatnot at Cougar, and I'm in particular interested in that piece because that's the--that's who I'm here representing is the family of deceased flight crew.

MS. TURNER:

A. Yes.

MS. O'BRIEN:

Q. I think the same thing could apply to other employees who Mr. Earle represents and whatnot who'd be in the exact same position. So what--you know, what kind of procedures, what do you have in place to ensure that you are

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getting the information that you need and people are free to talk?

MS. TURNER:

A. Yeah, sure. I talked before about in the interview process, it really needs to be an open dialogue. In order for people to open up, they need to feel that there's a level of trust and that the information that they're going to share is actually, number one, going to be listened to and number two, be protected in some fashion. I talked before and used the word about de-identifying information and there's actually a set school of process as to how that's done in the aviation community to remove that information. Now it's actually quite difficult in a small organization where everybody knows each other and everyone knows who is flying on that day.

MS. O'BRIEN:

Q. I would say impossible.

MS. TURNER:

A. You de-identify and take off the pilot's name and the aircraft number, but because people know that it was on the, you know, 10th of December, people can work out who was on

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shift.

MS. O'BRIEN:

Q. Sure.

MS. TURNER:

A. And so they are some of the global challenges in aviation safety culture and reporting. Now in terms of how we would get to that information, there's a couple of different areas where we'll be looking. Firstly is does the organization have an incident reporting system, and you've mentioned that yes, that is the case. One of the components of a safety management system is having an open reporting system that any employee can kind of put information in. The other avenue is also having what they refer to as a confidential reporting system, which basically is the same form that you would fill in to put in your concerns, but where that information goes, it's actually routed through a different structure so that it doesn't necessarily go through the chain of command, up through your supervisor, to the chief pilot, to the director, you know, to the CEO, et cetera. So the aim of confidential reporting is if a

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pilot or a crew member or an employee has that fear that they'll be penalized in some way, shape or form by putting up their hand or disclosing this information, that confidential reporting system is designed to either go outside the organization and it's like a whistle blower's structure, but for aviation incident reports, and then be informed at the highest level, at the CEO's level, that a confidential report has been submitted, it's of this nature and the investigative process takes place there.

So one of the things that we'll be looking at is does that process exist? If that process does exist, by accessing the information in that system, we could examine the effectiveness of that process and then couple that with speaking with the staff and crew and pilots, I would hope that we'd be able to have that dialogue and it would be trusted entity to be able to take that information forward, and so really is dealing with the sensitivities of human trust, of action.

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Even if it's not confidential and a pilot puts in an incident report, if management doesn't act on that concern or there's no visibility of that follow through, then it actually takes away people's confidence in even putting in the next incident report, because they'll say "well, last time nothing happened, so why should I go to the extent and put this in next time, if nothing's going to happen" and it goes into a grey sponge.

MS. O'BRIEN:

Q. Right.

MS. TURNER:

A. So there's some of the things that would be--we'd be looking at.

MS. O'BRIEN:

Q. The other concern that I have in terms of how you're going to be getting the valuable information in this particular case is, of course, there is litigation underlying -

MS. TURNER:

A. Yes.

MS. O'BRIEN:

Q. - this entire procedure. You know, this did come out of an accident where, you know,

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people were killed and everybody in this room well knows that nothing stills a tongue faster than pending litigation. People are just--corporations, everyone is reluctant to talk. Their lawyers are telling them don't talk.

MS. TURNER:

A. Don't say anything.

MS. O'BRIEN:

Q. Don't say anything, because you know, there's possibility that we're going to be in the Courts on this, and so I have a bit of a concern how this Inquiry is going to be satisfied that it is--that people are talking freely, that the information can be shared among the stakeholders when you have this elephant in the room.

MS. TURNER:

A. And we've actually had internal discussions here at the Inquiry about this very issue, about how do you create that trusted environment where the information put forward can be used for one purpose without necessarily being used in that litigation. Now I'm--I don't have a legal background. I'm not a qualified lawyer or attorney, and so one

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of the things that we will need to look at is the protection of that information, of how that--whether there's any jurisdiction or protection within the aviation acts and regulations for disclosure of private information. This has been a huge debate in the aviation industry globally around protection of disclosure.

Now we talked about just culture and you just referenced that before. One of the goals of the just culture, and it's not just a concept, there's actually a decision flow algorithm that sits behind it that is used in the investigation process about whether or not you attribute blame or whether or not it's a legitimate error or systemic failure where it leads to other either consoling a staff member, coaching, training, et cetera, or whether or not it is actually a breach and it was--you know, the issue was, I guess, somebody was negligent in fulfilling their roles and responsibility and so this is a very delicate area in aviation because clearly we want and need the information to be disclosed for self-improvement and to ensure that

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everything can be done to prevent these accidents from happening again. But then you've got this, as you say, like this overcast shadow of, you know, in the background, this reality of litigation and how that might influence people's behaviours to, as you say, you know, really not say anything, so to speak.

So we'll need to have some further dialogue around that and really possibly get back to the--well, all of the stakeholders say that there's a level of confidence as to how we navigate collectively through that to really achieve the outcome without necessarily inducing any unintended consequences from a litigation perspective.

MS. O'BRIEN:

Q. I should be clear that certainly the goal of litigation is--it's when a judge sits and decides on a case, that judge is looking to find facts. The judge is looking for the truth.

MS. TURNER:

A. Yes.

MS. O'BRIEN:

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Q. And that's why we have very liberal discovery procedures -
MS. TURNER:
A. Yes.
MS. O'BRIEN:
Q. - in this jurisdiction, so that information comes out and is shared. So my concern is not that people be allowed to keep their information confidential or secret. I would encourage information coming out and being shared, but I understand that the--realize the practicality is that people are reluctant to talk.
COMMISSIONER:
Q. Perhaps I should say to you, Ms. O'Brien, we're in the very first stage, which is the identification of issues. You are going a bit beyond that stage, as if the issues have already been identified. Now I, as Commissioner, am very conscious of the limitations in the Terms of Reference, especially the limitations vis-a-vis not finding criminal or civil liability, and in consultation with counsel, I will be very careful about releasing information or doing

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anything that might impact on any civil case.
MS. O'BRIEN:
Q. And to be clear, I appreciate what you're saying, but at this stage that's not really--my concern is not the results here. My concern is that how that affects your information gathering procedures at this stage.
COMMISSIONER:
Q. It may affect it, but it won't nullify it, at least that's our hope. But of course, we, as a Commission, and as a Commissioner, I have no control over what degree of trust, as it were, individuals may have in the Commission, but I would say this, I mentioned earlier this morning that I'm getting letters and telephone calls from people, both members of the public and those who work offshore. I will sift out the issues, as it were, very soon, probably within the next couple of weeks. I will be speaking to this group about issues or concerns that have been raised, but I certainly had no intention of divulging the names of the people who raised this, unless they ask me to, and nobody has asked me to in

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any of the letters as yet. Some of the letters don't even have a name attached, just a postmark. So I'm very conscious of that and that's something that I would not--my inclination and instinct would not be to reveal anyone's name, but the issue that was raised.
MS. O'BRIEN:
Q. Sure.
COMMISSIONER:
Q. I don't know if that's any help to you.
MS. O'BRIEN:
Q. It is. I mean, certainly I understand that piece, but say if someone provided this Commission information and they're providing it to the Commission but they want the information itself to be kept confidential. So I'm not talking about names or identifying information, but they want the actual information itself to be confidential. So for example, a company says you can speak to our employees and whatever, but we don't want what you learn to be shared, other than however it ultimately works its way into a result that you--the process. Would that be acceptable

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for this Commission?
COMMISSIONER:
Q. That's something that I would have to decide after taking advice, but we're not at that stage yet.
MS. O'BRIEN:
Q. Okay, and that's something I just at this--having listened to Ms. Turner, it's something that occurred to me.
MS. TURNER:
A. Absolutely.
MS. O'BRIEN:
Q. You know, as you're going through the process that it certainly raised questions in my mind how it was going to be handled and -
COMMISSIONER:
Q. Yes, and I'm glad you flagged it this morning.
MS. TURNER:
A. It's important.
COMMISSIONER:
Q. We've talked about it internally, but I'm glad you flagged it and now everybody is aware of the issue and that's good.
MS. O'BRIEN:
Q. Okay, and those are all my questions, so thank

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you very much.
MS. TURNER:
A. Thank you.
COMMISSIONER:
Q. Thank you. Now we turn to the other--I referred to you, I believe, Mr. Barnes, as Mr. Brown yesterday, didn't I? Sorry about that. I have it right now. Ms. Brown is sitting behind you, okay. I think Ms. Brown, I missed you yesterday in asking if you had any questions. You were there, Mr. Pritchard wasn't here for the Government of Newfoundland and Labrador. Are there any questions?
MR. PRITCHARD:
Q. No questions on behalf of the Province.
COMMISSIONER:
Q. Okay, thank you. Now who is remaining? I guess Inquiry counsel to wrap up any questioning.
MS. KIMBERLY TURNER, RE-EXAMINATION BY JOHN ROIL, Q.C.
ROIL, Q.C.:
Q. Yes, thank you, Commissioner. I guess, Ms. Turner, I'm trying to share some of the anxiety, I guess -
MS. TURNER:

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A. Yes.
ROIL, Q.C.:
Q. - that Ms. O'Brien had about examples and trying to bring this down to a level that the people that are watching out there, and many of them would be the travellers, trying to find examples of concrete things that you could find in an IRP and I understand your reluctance to sort of speculate in a world where sometimes speculation becomes broadcast. I don't mean that in the media sense, but becomes--the rumour becomes reality. But we do have--I have the document, the industry risk profile that you did on the Helicopter Emergency Medical Services. I don't know if you have a copy there. It's not before us.
MS. TURNER:
A. Well, that's what I was looking for before, and I've left it in the other office.
ROIL, Q.C.:
Q. Okay. Well, I can give you mine if you need it.
COMMISSIONER:
Q. If you want, I can provide one for the witness.

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MS. TURNER:
A. Thank you.
ROIL, Q.C.:
Q. Perhaps using that as an example where it has already been--the work has been done, can you just share with us a couple of the risks that were identified, how they were sort of ranked in terms of being serious, and then what the risk treatment strategies that were suggested, and I'll let you choose wherever they are, but perhaps some that are concrete that have teeth in them that might go beyond sort of culture and other issues, because I know some of them are broad and some of them are more focused.
MS. TURNER:
A. Sure.
ROIL, Q.C.:
Q. I'm looking at page 56, at the top of page 56. It's about training and whatnot in that case. I don't know if that's one you can -
MS. TURNER:
A. Actually, that's probably a good one. I'll use, if I may, Mr. Roil, two different examples. I'll first go to page 56, which is one of the risk areas in the HEMS, or the

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Helicopter Emergency Medical Services, area. Now the risk stated in this industry risk profile is a risk that the current training regime for a high percentage of the HEMS industry does not employ the use of simulators or advanced training methods broadly used in other parts of the aviation industry, predominantly due to cost.
ROIL, Q.C.:
Q. Right, so that was the risk?
MS. TURNER:
A. That's the risk.
ROIL, Q.C.:
Q. Okay, and how was that ranked in terms of its likelihood and the consequence and whatnot?
MS. TURNER:
A. It's consequence was considered major, which was the second notch down in the matrix that we saw yesterday, and the likelihood was likely, which was actually again at the third aspect. So if I was to--just to put this in perspective. Okay, so just looking at this matrix, being major--sorry, second from the bottom, and likely, it would fall in this area here. So it would be one of these dots.

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ROIL, Q.C.:
Q. I think actually one below there, major and likely -
MS. TURNER:
A. Sorry, there we go.
ROIL, Q.C.:
Q. One of those three little -
MS. TURNER:
A. That's right.
ROIL, Q.C.:
Q. - little pills, I called them.
MS. TURNER:
A. That's right, the pills. Now in terms of the treatment strategies, the first one was to develop a national training strategy for the HEMS industry. This training strategy would cover the full spectrum of training needs analysis. Now one of the aspects in this industry is to do scenario based training. So a training needs analysis would actually give you defined information about which scenarios would be needed and what associated skill sets, because clearly flying to a motor vehicle accident site at night in poor weather is very different to transporting a neonatal

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patient from hospital A to hospital B. So those two different scenarios would need to be considered from the competencies needed in that training environment.
The second is that the FAA and operators, being those the air operators, to convene a review to establish minimize scenarios, scenario based simulated training requirements. So based on that training needs analysis, to have that interaction between the aviation operators and the regulator to have some form of dialogue.
ROIL, Q.C.:
Q. Okay, and just so that we're clear, there was not just one company being examined in the Helicopter Emergency Medical Services. There were a large number, were there?
MS. TURNER:
A. That's correct. At the time of this risk profile, there was 74 air operating certificate holders, so 74 different aviation companies.
ROIL, Q.C.:
Q. Yeah, so factually, it's very different from ours, but -

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MS. TURNER:
A. That's right, that's right.
ROIL, Q.C.:
Q. - when you use the word "operators", there were many, okay.
MS. TURNER:
A. The next one here is to establish a helicopter safety education consortium to provide the full spectrum of accredited safety training. Now within the aviation industry, there are only a limited number of simulator providers and so the aim of that consortium is actually to provide access to the right training courses.
The next one, cooperation among operators in the use of simulators for new aircraft. Because this risk was predominantly restricted due to cost, clearly purchasing a simulator is extremely expensive and in terms of different companies buying the same aircraft type, for example, the Bell 429 or the Augusta Westland 139, the people that are purchasing those may actually be competitors, yet may fund, in a collective way, the investment into getting a simulator that is specific for their type. So

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you need to understand with some of these aircraft, there is no simulator with exactly the same model. So the pilots might go to simulator training, but be actually practising on a different aircraft type. The last -
ROIL, Q.C.:
Q. Okay, so just--sorry, finish up, please.
MS. TURNER:
A. The last one was to identify resource and expertise in respect of simulator working groups at either the national or international levels to gain that expertise. Now the simulator working groups and the Royal Aeronautical Society is listed there and they have inroads into the airline community that have actually achieved this, whereas this component of the helicopter industry has not to date. So to actually share that experience.
ROIL, Q.C.:
Q. Okay. So if I can take the risk management lingo out of what I just heard from you.
MS. TURNER:
A. Yes.
ROIL, Q.C.:

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Q. The risk was or the problem was that the crews were not prepared for unusual and difficult and challenging situations. They didn't have simulator training in that case. The companies were competing with one another and perhaps were small and couldn't all own their own simulator, so the solution was to find a method whereby simulator use could be shared amongst competing companies?

MS. TURNER:

A. That's correct.

ROIL, Q.C.:

Q. Okay. So I think that perhaps would not be at all relevant in our fact situation.

MS. TURNER:

A. That's right.

ROIL, Q.C.:

Q. But I think people will perhaps understand how the risk profile looks at a problem, looks at the challenges in that problem and tries to find a solution.

MS. TURNER:

A. That's good. Mr. Roil, if I may, you've touched on the issue and the solution, or the risk and the treatment strategy. Now in the

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dialogue that we just had with Ms. O'Brien and also some of the other questions that we've had, really looking at the relationship with the operational event. If we look down the column on this page 56, there is a column that sits next to the risk which actually has the impact on the HEMS industry, and so these are all those consequences or potential consequences that could occur if this risk is not resolved.

ROIL, Q.C.:

Q. Yes.

MS. TURNER:

A. And that's actually a very, very important list and there's 11 different impacts, most of those negative, that if this risk is not addressed, these things could transpire, could or may.

ROIL, Q.C.:

Q. Yes.

MS. TURNER:

A. And there's various things here in terms of an impact may be that the crews are unprepared for emergency situations such as an engine failure, as you can't practice that in real

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time. That crews aren't prepared for unusual or rare situations, so those scenarios that we talked about. The crew cohesion may not be as strong--sorry, the crew cohesion not as strong and structured as it could be. The decision making and risk management could be less structured. Now how these things have been derived are basically through the information that's been collected, where comments were made by the pilot group and the pilot association and pilot surveys, et cetera, that they didn't feel prepared for this because you can't practice, and so you can see that that column of how it works, that's actually at an operational or organizational level, what would normally be on the list of risk, but in an industry risk profile, we look at that layer behind it and we compile into a more strategic level industry issue that can be monitored and addressed.

ROIL, Q.C.:

Q. Yeah, so the ultimate premise, I take it, is that an incident doesn't often happen because of one failure. Usually there are a series of events. That's the swiss cheese theory?

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MS. TURNER:

A. That's right.

ROIL, Q.C.:

Q. Because something bad happens, you can't always just blame it on one thing. You often find there are other reasons behind that.

MS. TURNER:

A. Multiple, that's correct.

ROIL, Q.C.:

Q. This document, I think you said, has been released publicly. I don't know if it's available free of charge. I understand that we might be able to make this available to the parties in the room, if we can't offer it to the public generally. There is a mechanism whereby, I gather -

MS. TURNER:

A. There is, and I will confirm that this document is available to download free of charge off the Flight Safety Foundation website.

ROIL, Q.C.:

Q. Okay. So if you go to the Flight Safety Foundation website, which is?

MS. TURNER:

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A. Which is www.flightsafety.org and if you do a search on their website for HEMS IRP, it will come up and you can download that document.

ROIL, Q.C.:

Q. Good. Thank you very much. That's all the questions that I have. The Commissioner may have some, obviously.

MS. KIMBERLY TURNER, EXAMINATION BY COMMISSIONER WELLS

COMMISSIONER:

Q. Thank you, Mr. Roil. Yes, Ms. Turner, I have one question really. I'll preface it perhaps with a remark or two. I remember in the '70s acting as counsel on a public commission on safety that involved certain accidents and fatalities in the province. The words "risk management" and "risk assessment" were never spoken in that process. So risk management and risk assessment, as I understand it, are fairly new, and what I'd like to ask you, and without divulging any information belonging to your clients, but in your experience, if an organization has adopted the sort of things that you're proposing, how has it worked? What has happened?

MS. TURNER:

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A. Sure. Now that's a very correct observation in terms of risk management is a fairly new field, and I'd just draw some parallels that the formalization of risk management, it's been around for, say since the mid '90s in its formal sense, in the business discipline, but in some of the specialty industry areas, like the nuclear industry and science and mining, et cetera, very much safety risk has been more formalized dating back a little bit further, but I draw the parallel that the emergence of the risk management discipline is a little bit like where project management was at 20 years ago. People clearly managed projects, yet maybe you couldn't go and buy the project management book of knowledge with the ten step or the methodology or you couldn't buy a software program or get an accreditation or a post-graduate degree in the science of project management.

Risk management is very similar to that, and it's probably ten years behind project management, but rapidly becoming part of business, the community, accountability, all the way through to operational practice all

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around the world and it really is becoming part of the fabric of decision making and assurance.

In terms of how this has worked, and I'll talk about both industry level risk profiles, because that's the context of our discussions, but you can apply this risk process within a company at the business level or you can apply this process at an operational level and in this scenario, the actual operational task of flying to a rig with a helicopter.

So in terms of how it has worked, I think the beauty of the risk management process is having a documented process that gives you a road map of the jobs that need to be undertaken in order to formally reduce risk. So that in a collective setting, you can actually check off that the jobs have been done and rather than just having an intuitive confidence that everything's okay, you've actually got facts and figures in front of you that those risk treatment strategies are underway or in progress.

So a couple of examples at the flying

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level. There's one of our clients in the United States actually undertakes search and rescue task profiles. Now that would only be about five percent of the type of flying that they do. So it's not that regular, and it's really interesting that they're a fairly small organization with two aircraft and about maybe ten pilots, and it's actually very interesting that when you sit down with the pilots and actually say "well, how do you undertake this type of task?" they all actually did it a slightly different way. Now there was no right or wrong, but over the years, different people have built that experience. So at an operational level, through applying the risk management process, we were able to gain input from the whole pilot group, actually map how do you do it and how do you do it, and then compare it and say, oh, they're about 20 percent. Well, how do we want to do it as an organization, and then there was an alignment of the task sequence, in terms of the order that they would fly that task. Even little things like the criteria to cancel a search. It was very much an individual criteria of

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when the pilot wasn't--basically felt that they were at their limit or that the search wasn't actually going to be successful. So the organization was able to get some definition around that process and get consistency in a pilot group, which really didn't have that much non-alignment. It was more just tidying up to get consistency, and then from their safety management system perspective, now when they actually go out and undertake the search and rescue tasks, they refer to that operational risk profile before they accept the task, during their flight briefing process, just to make sure that, you know, everything's in line.

Now it doesn't restrict them from doing things outside the boundaries, but what it does do is it gives them a nice definition that if today's task falls outside that mission profile or that task profile, that then triggers them to spend a little bit more time to do additional quick risk assessment. That information is then captured in the flight debriefing process when they come back and they've got time, because clearly a search

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and rescue task, often there's time constraints right upfront. Then in that debriefing process, they have a cycle where that on a monthly basis, the quality group or the safety committee actually reviews the number of variation reports that they get and they will actually update or at least have the dialogue of whether they want to change and shift where the corporate boundaries are for that type of flying.

So the question is well what value does that add? A couple of things. Firstly, there's a high level of assurance around consistency that the task is being done in the same way or at least with consistent practices. The second output is that that organization now has a formal documented process to capture the variations and so rather than just over the years the task, search and rescue tasking started like this and then in five years time it actually--the boundaries have skewed and it's like this. That actually now they can capture that. The third output is they have a process for then asking the so-what question, about so what

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does that shift mean? Do we need to change our procedures? Do we need to change our training regime? So this starts now getting into organizational decisions about pilot training, about, you know, crew selection, about the aircraft type and the aircraft suitability, equipment. So you can see that an operational level issue, if it's done in the right way, and the crews, on a monthly basis, sit down and say "so what? So what do we need to change?" Well, let's not change anything at this stage, but let's just continue to monitor the shift in the profile.

Now if over a one or a two-year period, and maybe 30 different tasks, search and rescue tasks or 50 different tasks that come in, there's this big shift, that would then give justification to then spend some resource or change and re-divert resource to then shift the pilot training regime.

So you can see how this logical flow of a very simple activity that took them maybe three hours to develop, the largest thing is actually getting people to use those processes when they're not used to it. So there needs

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to be some level of implementation activity that goes with that, but you can see then that the safety management system is actually real and alive and is used and has benefit to the pilots, but also to the organization. So there's one good example of how that has helped.

Have they actually reduced accident and incidents? Well, they haven't had the level of serious events that they had. They had two tail rotor strikes with trees prior to that and when they did their internal investigation, they found that that was because they were working outside the expected norm of that task profile and they were shifting without necessarily having that shift in the training and the procedures that needs to go with that to give you the defences. Will it give you an absolute certainty that they won't have an incident? No, it won't, but certainly it does go a long way to providing a high level of confidence and assurance that the processes are in place and are sound. So there's an example from an operational perspective.

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When we're talking about industry risk profiling, it's the same job, but a much broader application. So rather than trying to just change the practices or monitor the practices of ten air crew, it might be looking at a whole industry. Now in this case, this industry sector that we're looking at is quite contained. It is quite small. You're fortunate that at this stage you have one aviation provider. So the boundaries are actually quite tight. In the helicopter medical industry, when you're talking 74 different companies, all with different business models spread right across the country, clearly the level of effort that's required to bring about that implementation is much more comprehensive and a much more challenging task and will need a lot of support and rigor, both the stick and the carrot, to actually help that take place.

Now one practical example of an industry risk profile that we conducted for the parachute industry, I mentioned that one yesterday. Within the context of the parachute industry that was assessed and a

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industry risk profile was done, it actually comes under a private classification. So the operators that fly the planes don't have a requirement to have an operating certificate like the airlines. So it's a private aircraft for private usage. So it comes under a different regulatory regime. Now because of all of that and the context of the industry is you're jumping out of the aircraft, you're not necessarily travelling in it, so a lot of the--when you look at the fleet profile, and that is something that actually was undertaken as part of that industry risk profile, we looked at all the different aircraft types. We looked at their age. We looked at their configuration. We looked at the aircraft management systems that goes around the airworthiness in that case, and one of the concerns was because a lot of modifications are made and doors are taken off so parachuters can jump out the side or the back or, you know, all of these various things, the management of old aircraft that it really wasn't on the horizon to replace them with brand new shiny aircraft because of the type

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of job that they do. One of the risk treatment strategies was for the industry, sponsored by the industry association, to develop an aircraft hazard management package that could assist the organizations in identifying the hazards of their older aircraft and then, at an industry level, monitor that to see whether or not other activities could be undertaken to educate or to bring to the attention of the regulator or to get some type of intervention.

So there's a real practical example at an industry level. As I mentioned, it's the same process but when it's a lot broader and when there's more players involved or there's more operators, it becomes a more complex issue to implement, which is why, at an industry risk profiling level, you generally have the involvement or the sponsorship of these IRPs by a regulator, because they actually do have oversight, control and influence of the industry group itself.

COMMISSIONER:

Q. Okay, thank you. Anything arising, ladies and gentlemen? Okay then, now I think, Ms. Fagan,

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you have something to say unrelated to this matter.

MS. FAGAN:

Q. Thank you, Commissioner. This will be the end of the evidence for today and the next hearing day is Thursday, and as you are aware, Thursday the witness that's scheduled is Robert Decker and Robert Decker is the lone survivor of the March 12th crash, and he's going to appear at the Inquiry to describe his experience.

Now I'd just this group to be aware, and the viewers to be aware, that there's a tremendous interest in the information that Mr. Decker is going to provide the Inquiry and a large number of the family members of the passengers and crew of the Flight 491 have expressed an interest in attending on November 5th and I understand many of the families are travelling, some a considerable distance, in order to be here in person and attend in this room, and as we've all discussed and some of the viewers at home may not be aware that, you know, the room has a limited capacity and there are fire regulations that only allow us

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to go so far, and it is the will of the Commissioner and the Inquiry and as well the parties that priority be given to these family members, and many of the parties have indicated that they will allocate some of their spaces that are normally assigned for the parties for the family members. In light of this and in light of the size of the room, unfortunately there is not going to be any space for the general public and I just would like the general public to know that because of the size of the room and because of the desire to give priority to the families, the room will not be able to accommodate the general public.

Now this information is going to be webcast and is going to be broadcast on Rogers. So we're encouraging the people who would like to view this information to the first priority should be to view it through their televisions. The second source would be the webcast and through their computers. However, sometimes these computer systems, although we've been told they're reliable, sometimes if there's an excessive amount of

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traffic on the internet lines, you can, you know, experience a problem. We're doing our best. Our web provider has said that it should be able to accommodate all the traffic. However, we'd encourage those to look at their TVs as their first source.

So this group, the parties, have assigned an allocated some of their seating and there will be assigned seating. So the parties will receive a number and an assigned seat and the first priority will be to the families, and I should get the seat numbers out to everybody probably some time tomorrow. I hope that is clear. Thank you.

COMMISSIONER:

Q. Okay then, thank you. All right then, we'll adjourn until Thursday morning at 9:30. Thank you.

ADJOURNED TO NOVEMBER 5, 2009 AT 9:30 A.M.

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CERTIFICATE

We, the undersigned, do hereby certify that the foregoing is a true and correct transcript of a hearing heard on the 3rd day of November, 2009 at Tara Place, 31 Peet Street, Suite 213, St. John's Newfoundland and Labrador and was transcribed by us to the best of our ability by means of a sound apparatus.

Dated at St. John's, NL this
3rd day of November, 2009
Cindy Sooley
Discoveries Unlimited Inc.
Judy Moss
Discoveries Unlimited Inc.