

OFFSHORE HELICOPTER SAFETY INQUIRY

October 28, 2009

Tara Place, Suite 213, 31 Peet Street

St. John's, NL

October 28, 2009

PRESENT:

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Geoffrey Spencer..... Helly Hansen Canada Ltd.

Rolf Pritchard.....Government of Newfoundland and Labrador

Jonathan Tarlton/Mark FreemanDepartment of Transport Canada

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Jamie Martin.....Families of Deceased Passengers

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

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..... Local 2121

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1 October 28, 2009
 2 COMMISSIONER:
 3 Q. Good morning, ladies and gentlemen. I'd like
 4 to welcome this morning Mrs. Wendy Tadros, who
 5 is the Chair of the Transportation Safety
 6 Board, and with her and assisting her is Mr.
 7 John Cottreau and I'm very pleased to welcome
 8 them both and Ms. Tadros, you'll recall that
 9 at the beginning of my remarks, at the very
 10 beginning, I mentioned that it was important
 11 that I felt that we get the view from the
 12 Offshore Petroleum Board and then Transport
 13 Canada and particularly important, of course,
 14 is the role of the Transportation Safety
 15 Board, which is the investigative body of
 16 incidents and accidents in all fields in
 17 Canada, but particularly in our case, we're
 18 concerned with the aeronautics side and so I
 19 welcome Ms. Tadros and she will make a
 20 presentation to us and there will be an
 21 opportunity afterwards for her to take
 22 questions from you. Okay then, Mrs. Tadros.
 23 MS. TADROS:
 24 A. Thank you, Mr. Commissioner. I must say I'm
 25 very pleased to be here in St. John's and to

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1 participate in your Inquiry and to help you
 2 out in any way we can at the TSB. It also
 3 gives me an opportunity to visit your
 4 community and to personally thank the many -
 5 REGISTRAR:
 6 Q. Excuse me, sorry to interrupt. Mr.
 7 Commissioner, should I swear Ms. Tadros.
 8 COMMISSIONER:
 9 Q. Not for the moment.
 10 REGISTRAR:
 11 Q. Okay.
 12 COMMISSIONER:
 13 Q. Okay.
 14 MS. TADROS:
 15 A. Okay, maybe when we finish the presentation
 16 then we'll do that.
 17 COMMISSIONER:
 18 Q. Yes.
 19 MS. TADROS:
 20 A. Okay. Yes, I was saying it gives me the
 21 opportunity to personally thank the many, many
 22 people who helped our investigators last March
 23 in the very early days after the accident when
 24 an awful lot needed to be done and it needed
 25 to be done very, very quickly.

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1 I recognize this Inquiry is important to
 2 your community and particularly to the
 3 families who lost loved ones in the crash of
 4 Cougar Flight 491. It's also very important
 5 to us at the TSB, no more so than to the team
 6 of investigators who arrived in St. John's in
 7 the days following the accident and whose
 8 faces you have come to know. Those same
 9 investigators are still hard at work in
 10 pursuit of the facts and the answers that we
 11 all need to ensure this tragedy does not
 12 repeat itself. This investigation is one of
 13 the Safety Board's top priorities. A very
 14 strong and capable team of professionals has
 15 been assigned to this work.
 16 While the team focuses on their work, I'm
 17 happy to be here to explain to you what to
 18 expect as the TSB investigation unfolds and
 19 discuss the role of my organization and what
 20 we do to advance transportation safety. We're
 21 not a regulator. We are an independent
 22 investigative body. Over the last 20 years,
 23 the Transportation Safety Board has built an
 24 international reputation as a leader in
 25 accident investigation. To this end, our

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1 annual report reflects the volume of
 2 investigations and activities undertaken in
 3 the last year to advance safety in marine,
 4 rail, pipeline and aviation. Our annual
 5 report is Document No. 1.
 6 I'm sure a question on the minds of many
 7 is how does this Inquiry, your Inquiry, differ
 8 from the TSB's investigation. So right off
 9 the top, let me clearly distinguish your
 10 Inquiry from a TSB investigation.
 11 Offshore oil workers move back and forth
 12 by helicopter every day. You will look
 13 carefully at the role of the C-NLOPB and what
 14 they can do to ensure workers get safely to
 15 and from offshore rigs. I would maintain that
 16 the Offshore Petroleum Board can influence
 17 aviation safety indirectly through its
 18 regulation of petroleum producers. It can
 19 also raise the safety bar through the
 20 imposition of license conditions and the
 21 setting of contract provisions, and this is a
 22 good thing.
 23 By contrast, the TSB's role is to advance
 24 the safety of aviation and helicopter
 25 operations worldwide. We do this by

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1 investigating accidents, whether in the
 2 offshore or elsewhere in the world. We seek
 3 to find out what happened and why it happened.
 4 In accordance with our legislation, we take a
 5 systemic approach to all our investigations.
 6 We run the gamut of issues from the immediate
 7 causes of an accident to the risks Canadians
 8 may encounter and we do all of this to learn
 9 lessons to make the system safer.

10 At the end of the day, it really is my
 11 belief that this Inquiry and the TSB
 12 investigation, each in their own way, will
 13 improve safety for the people of Newfoundland
 14 and Labrador.

15 Before I tell you about how we work, let
 16 me put the TSB's independent investigation of
 17 aviation accidents in perspective. Let me
 18 give you a little bit of context.

19 In 1990, the Government of Canada passed
 20 the Canadian Transportation Accident
 21 Investigation and Safety Board Act, and that's
 22 a very long title, and so we refer to it as
 23 the CTAISBA Act. This legislation contains a
 24 set of principles and gives the TSB its power
 25 to investigate accidents and incidents. When

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1 there is a transportation accident in rail,
 2 marine, aviation or pipeline, the legislation
 3 allows the TSB to occupy the field. When the
 4 Safety Board is investigating, no other
 5 Federal Government Department, other than the
 6 Department of National Defence, can
 7 investigate for the purpose of determining
 8 causes and contributing factors. This
 9 exclusivity goes beyond Canada's borders.
 10 When we are investigating an aviation accident
 11 in accordance with international agreements,
 12 no other country can investigate, period.

13 An example very close to home is our
 14 investigation of the Swissair 111 crash. The
 15 aircraft was manufactured and certified in the
 16 United States. It took off from New York,
 17 bound for Switzerland. The carrier and the
 18 crew were Swiss and the passengers came from
 19 many places in the world. The Canadian
 20 connection, if you will, was the waters off
 21 Nova Scotia or the crash site. This gave
 22 exclusive jurisdiction to the TSB. Canada is
 23 one of about a dozen nations, in keeping with
 24 international protocols, that conduct
 25 independent accident investigations for the

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1 sole purpose of advancing safety.

2 Three fundamental principles form a solid
 3 foundation for this approach. The first
 4 principle is to separate the investigation
 5 from the influence of regulators, airlines,
 6 manufacturers and any other body with an
 7 interest. This is because all of our
 8 investigations look at these players and at
 9 their roles. Let me give you an example of
 10 one player, the regulator, who you heard from
 11 earlier this week, Transport Canada. They set
 12 safety standards for the industry. They
 13 license air carriers and crews and enforce the
 14 Canadian Aviation regulations. In all our
 15 investigations, we can and must look at the
 16 role of the regulator and we look specifically
 17 at their role in overseeing the industry.
 18 This means that Transport Canada has a direct
 19 interest and therefore cannot objectively make
 20 findings on their own role. The TSB, because
 21 of its independence, can follow the evidence
 22 wherever it may lead and say what we need to
 23 say.

24 The second principle is to separate the
 25 investigation from legal proceedings. Having

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1 served on the Bench for many years, sir, I'm
 2 sure you know well that issues of criminal or
 3 civil liability rightly belong with the
 4 Courts. Whereas the TSB's sole purpose is to
 5 advance transportation safety and we do not
 6 lay blame. Moreover, TSB investigators cannot
 7 be called into Court and the Board's findings
 8 cannot be used in Court or disciplinary
 9 proceedings.

10 The third principle is to conduct our
 11 investigations in accordance with agreed upon
 12 international practices and standards. Canada
 13 follows the International Civil Aviation
 14 Organization's Annex 13 to the Convention on
 15 Civil Aviation, and that is Document No. 4.
 16 This Annex sets out the protocols for
 17 determining which state will conduct the
 18 investigation, the roles and responsibilities
 19 of other states in an investigation and how
 20 the investigation is to be conducted. Above
 21 all, it states clearly that the sole objective
 22 of an investigation shall be the prevention of
 23 accidents. That is the only objective.

24 The application of these three important
 25 principles, the independence of the

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1 investigation, the separation from legal
 2 proceedings and the adherence to international
 3 agreements help ensure public confidence in
 4 the TSB and the work we do to advance aviation
 5 safety. This process or this approach has
 6 proven very successful. As I mentioned
 7 before, it has put the TSB at the forefront of
 8 accident investigation worldwide. But a
 9 process is nothing without a dedicated
 10 workforce to put it into action.

11 I really hope you will take away with you
 12 a sense of my pride in the work of the 235 men
 13 and women who make up the TSB. These people
 14 are specialists in investigations,
 15 engineering, metallurgy, human factors,
 16 communications and human resources, to name
 17 just a view. They are focused and dedicated
 18 to our mission. They are engaged every day in
 19 making transportation safer than it was the
 20 day before, not only for Canadians, but for
 21 people around the world. They are the ones
 22 who, after careful science and thorough
 23 analysis, nail the causes and contributing
 24 factors leading to accidents, and they provide
 25 the Board with the information it needs to

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1 make recommendations, recommendations that can
 2 be credited with changing the way aircraft are
 3 operated and maintained and with improving the
 4 way they are designed, built and certified.

5 Now I would like to show you our
 6 corporate video. We'll just give you the
 7 short version this morning. This was created
 8 in house at our engineering laboratory. It
 9 will provide you with an overview of the work
 10 we do day-to-day. I'll add a few details
 11 after the video, but just in passing, I can
 12 tell you it's also available in French.

13 COMMISSIONER:
 14 Q. Okay.
 15 (VIDEO PLAYED)
 16 The TSB's mission is to conduct
 17 independent safety investigations and
 18 communicate risks in a transportation system.
 19 No matter where in Canada the accident occurs,
 20 isolated in the middle of the bush, out at
 21 sea, or in the high Arctic, TSB's diverse
 22 workforce has the necessary experience,
 23 training, tools and equipment to perform
 24 specialized tasks. The TSB also represents
 25 Canadian interests in foreign investigations

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1 involving ships, pipelines, railway rolling
 2 stock or aircraft that are registered,
 3 licensed or manufactured in Canada. Reporting
 4 directly to Parliament through the President
 5 of the Queen's Privy Council, the
 6 Transportation Safety Board of Canada is an
 7 independent agency and a recognized leader in
 8 transportation safety investigation. In
 9 addition to its head office and engineering
 10 laboratory in the National capital area, the
 11 TSB has eight regional offices across the
 12 country in strategically placed locations to
 13 better enable rapid response to accident
 14 sites.

15 Canada is a vast country and the
 16 transportation industry plays a vital role in
 17 the Nation's economy. The marine
 18 transportation sector involves more than 300
 19 million tons of cargo and over 55 million
 20 passengers per year. Freight and passenger
 21 trains travel over more than 80,000 kilometres
 22 of rail. Natural gas and oil pipelines
 23 stretch for over 50,000 kilometres across
 24 Canada and there are over seven million air
 25 movements within Canada's air space to

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1 transport more than 70 million passengers per
 2 year.

3 On average, over 4,000 transportation
 4 related occurrences are reported each year to
 5 the TSB. Investigations are initiated when
 6 occurrence analysis will lead to a reduction
 7 in risks to persons, property or the
 8 environment. At accident sites, TSB personnel
 9 work in cooperation with various
 10 organizations, whether they be international,
 11 federal, provincial, municipal or private
 12 companies, in order to investigate an
 13 occurrence in an efficient and timely manner.
 14 Often representatives from the transportation
 15 industry are invited to watch a TSB
 16 investigation in progress.

17 A TSB investigation consists of three
 18 phases, the field phase, the post-field phase
 19 and later, the report production phase. The
 20 TSB concentrates on the dangerous conditions
 21 that could compromise the safety of people,
 22 property or the environment as revealed by
 23 transportation accidents. The TSB will not
 24 hesitate to issue preliminary recommendations
 25 or other safety communications if they could

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1 have an immediate impact on transportation
 2 safety.
 3 On site, TSB staff examine and document
 4 everything in detail. Investigators use all
 5 possible methods and resources to enable a
 6 thorough and objective investigation in order
 7 to draft accurate findings and identify safety
 8 deficiencies. After each investigation, a
 9 draft report is sent by the Board on a
 10 confidential basis to designated reviewers who
 11 have a direct interest in the occurrence.
 12 They may suggest corrections, dispute or
 13 contradict the draft report if it is believed
 14 that the information is inaccurate or
 15 mistaken. The Board carefully considers all
 16 comments on a draft report. The TSB report is
 17 then finalized, depicting the description of
 18 the occurrence, analysis of the issues,
 19 findings, deficiencies and safety actions
 20 taken or required. The final report is then
 21 released to the public in both official
 22 languages. The Board will continue to monitor
 23 the actions of industry, the regulator and
 24 operator as to how they address the Board's
 25 safety concern.

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1 In recent years, the TSB has issued
 2 recommendations addressing numerous safety
 3 issues, including crew fatigue, electrical
 4 wiring, recorder capacity, outdated life
 5 rafts, rail passenger safety and overheated
 6 brake systems. Canada is recognized
 7 internationally to have one of the safest
 8 transportation systems in the world. The
 9 important work mandated to and conducted by
 10 the TSB contributes to safer waterways,
 11 railways, pipelines and skies, not only in
 12 Canada, but around the world. The TSB will
 13 continue to build awareness of safety issues
 14 and to promote the development of a strong
 15 safety culture within the transportation
 16 industry to advance transportation safety.
 17 This is the number one priority of the
 18 Transportation Safety Board of Canada.
 19 (VIDEO ENDS)
 20 MS. TADROS:
 21 A. Okay. So you now know that there are three
 22 basic phases to a TSB investigation. I want
 23 to tell you a little bit more about those
 24 phases. They are described in some detail in
 25 our pamphlet entitled "Investigation Process"

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1 and that's Document No. 6. The first phase is
 2 the field phase. An investigator in charge,
 3 or IIC, is appointed and an investigation team
 4 is assembled. The make up of the team is
 5 based on the circumstances of the occurrence
 6 and investigation needs and may consist of
 7 operations, equipment, maintenance,
 8 engineering, scientific and human performance
 9 specialists. The number of investigators sent
 10 to an occurrence site varies from one or two
 11 for a relatively straightforward investigation
 12 to ten or more for a major investigation.
 13 The field phase can last from one day to
 14 several months. During the phase, team
 15 members will secure the occurrence site,
 16 examine the equipment, vehicle or wreckage on
 17 site, interview witnesses, company and
 18 government personnel, collect pertinent
 19 information, select and remove specific
 20 wreckage for further examination, review
 21 documentation and identify potential unsafe
 22 acts and unsafe conditions.
 23 The second phase of the investigation is
 24 the post-field phase. Significant
 25 investigation activity takes place after the

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1 TSB departs the occurrence site and this is
 2 the phase that we are in in our investigation
 3 of Cougar 491. The post-field phase can take
 4 many, many months, depending on the size and
 5 complexity of the investigation. During the
 6 post-field phase, the TSB typically examines
 7 all relevant company, vehicle, government and
 8 other records, examines selected wreckage in
 9 the laboratory and tests selected components
 10 and systems, analyses records and data,
 11 creates simulation and reconstructs the
 12 events, conducts further interviews,
 13 determines the sequence of events, what
 14 happened and when it happened, and identifies
 15 safety deficiencies by looking at occurrences
 16 in Canada and abroad.
 17 At the end of the post-field phase, the
 18 IIC produces an initial draft investigation
 19 report that is reviewed by other TSB experts.
 20 At this stage, this is really a form of
 21 scientific challenge, as all the experts get
 22 together and test the theories on one another,
 23 look at the evidence and there's a challenge
 24 process. When everybody is settled on exactly
 25 what the facts are and what they mean, then

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1 the report moves forward through the director
 2 of investigations.

3 During the first two phases of the
 4 investigation, a built-in independence
 5 separates the work of the investigators from
 6 the Board. The Board is not involved in the
 7 work and exercises no control or influence
 8 over the direction of the investigation. This
 9 really leaves investigators free to ask any
 10 questions and to follow all leads. So for
 11 instance, in the investigation of Cougar 491,
 12 while the Board has been kept apprised of the
 13 conduct of the investigation, they have not
 14 been involved in any of the investigative or
 15 communications developments.

16 The third phase is the report production
 17 phase. In this phase, the Board steps up to
 18 review the draft investigation report, which
 19 may be approved, amended or returned for
 20 further staff work. Once the draft report is
 21 approved, the TSB legislation requires this
 22 report to be sent to designated reviewers on a
 23 confidential basis. The designated reviewers
 24 are persons and corporations whose performance
 25 or products are being remarked on in the

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1 report. They are most qualified to comment on
 2 the accuracy. For this reason, they are given
 3 the opportunity to dispute, correct or
 4 contradict information they believe is
 5 incorrect or unfairly prejudicial to their
 6 interests. This process really is intended to
 7 both ensure procedural fairness and the
 8 accuracy of the Board's final report, and the
 9 Board considers all comments and will amend
 10 the report if it is convinced that a change is
 11 warranted. Once the Board approves the
 12 report, the final report, it is then released
 13 to the public.

14 Many cooperate with the TSB during an
 15 investigation. We work with all levels of
 16 government, transportation companies,
 17 equipment manufacturers and individuals, such
 18 as survivors, witnesses, next of kin and
 19 operators. We also work with coroners,
 20 police, fire departments and search and rescue
 21 teams. This cooperation is absolutely
 22 essential to a successful investigation.

23 When fatalities occur, the police,
 24 coroner or the transportation company will
 25 advise the next of kin, and along the way, the

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1 TSB keeps survivors and next of kin informed
 2 and may request interviews with them to assist
 3 in the investigation. TSB investigators
 4 conduct interviews with anyone who may be able
 5 to assist them with their investigation. The
 6 statements and the interviews are protected
 7 under our Act and individuals are never named
 8 in a Board report.

9 The Board may also grant observer status
 10 to anyone who, in its opinion, can contribute
 11 to the investigation. In this regard,
 12 representatives from transportation companies,
 13 equipment manufacturers and regulatory
 14 agencies often attend our investigations,
 15 under the supervision, of course, of the
 16 investigator in charge, and in accordance with
 17 certain conditions that may be imposed.

18 International agreements also entitle
 19 other countries to designate accredited
 20 representatives to Canada's investigations.
 21 The TSB also sends its people to
 22 investigations in other countries. These
 23 representatives really bring technical
 24 expertise to those investigations.

25 I want to give you more detail and when

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1 and why we investigate and the methodology we
 2 use.

3 MS. FAGAN:
 4 Q. Commissioner, just like to interrupt for one
 5 moment. The technology is not working. I
 6 understand there's a PowerPoint that will go
 7 with this portion of the presentation, and if
 8 we could just take a two-minute break because
 9 we'd just like to correct that, so that the
 10 PowerPoint -

11 COMMISSIONER:
 12 Q. You think it's a matter of two or three
 13 minutes or ten minutes? Any idea?

14 MS. FAGAN:
 15 Q. Could be -

16 REGISTRAR:
 17 Q. I have no idea.

18 MS. FAGAN:
 19 Q. No more than five. If it can't be corrected
 20 in five minutes, we'll just have to move on.

21 COMMISSIONER:
 22 Q. All right, well then we can--no need for us to
 23 sit in our seats. We'll just come back in
 24 five minutes.

25 MS. FAGAN:

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1 Q. Thank you.
 2 (BREAK)
 3 COMMISSIONER:
 4 Q. -- are we able to do now?
 5 MS. FAGAN:
 6 Q. Well, the equipment is now working and I
 7 understand we'll be able to move through the
 8 slide presentation.
 9 COMMISSIONER:
 10 Q. Okay.
 11 MS. TADROS:
 12 A. Okay, John? Okay. I want to give you a
 13 little bit more detail about when and why we
 14 investigate and the methodology that we use.
 15 Every investigation starts with a notification
 16 of an occurrence with over 4,000 occurrences
 17 reported to the TSB each year. The initial
 18 information must be assessed against our
 19 occurrence classification policy to determine
 20 how much investigating to do. One of the
 21 things we look at very carefully is whether
 22 the available evidence is enough for the Board
 23 to determine the causes and contributing
 24 factors. The other consideration is whether
 25 new safety deficiencies would likely be

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1 uncovered. If there's a real potential to
 2 advance safety, we launch an investigation and
 3 the occurrence classification policy is
 4 Document 7.
 5 The TSB has developed a methodology that
 6 we call the integrated safety investigation
 7 methodology or ISIM. Other industries, like
 8 the nuclear industry use similar approaches.
 9 This type of methodology is also used in
 10 accident investigation in other countries.
 11 I've made these slides and the ISIM training
 12 manual available to you as Documents 8 and 9.
 13 ISIM is an analysis tool. The purpose is
 14 to examine each accident for safety
 15 significant events to identify unsafe acts or
 16 unsafe conditions. We then search for the
 17 underlying factors that made the unsafe acts
 18 or conditions possible. At this stage, it
 19 really is about asking a whole lot of whys,
 20 which prompts us to drill down and uncover new
 21 facts. Next, we assess the nature and extent
 22 of risks to safety. This includes analysis of
 23 the risk controls or safety defences in place.
 24 Inadequacies in safety defences are found
 25 in every accident. Either the means of

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1 controlling the risk didn't exist or they
 2 didn't function as intended. There are two
 3 categories of defences, physical and
 4 administrative. Physical defences include,
 5 for example, alarms and warning lights in the
 6 cockpit, runway lighting and air traffic
 7 control radar and administrative defences
 8 include standards, regulations, operating
 9 procedures, supervision, training and the
 10 like.
 11 Let me just give you a slice of a
 12 hypothetical investigation. A commuter
 13 aircraft carrying 11 passengers crashes on
 14 landing. On examination, it's clear that the
 15 pilot did not select the landing gear down.
 16 This is an unsafe act. The pilot did not
 17 react to the alarm warning that the landing
 18 gear was not in the down and locked position.
 19 This is an unsafe condition. In trying to
 20 determine why, investigators find that the
 21 alarm functioned properly. Upon further
 22 analysis, the investigators learned that the
 23 pilot had only slept five of the past 36 hours
 24 and was significantly fatigued. In this
 25 scenario, fatigue is the underlying factor.

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1 Investigators will look carefully at the
 2 reasons for the pilot's fatigue to determine
 3 the level of risk. They want to know is this
 4 as isolated event or does it represent a risk
 5 to the system as a whole. They will then look
 6 at whether defences were in place, and if so,
 7 whether they were adequate. These would
 8 include administrative defences like duty time
 9 regulations, company policies and training,
 10 pilot scheduling and company means of
 11 identifying hazards. Where these defences are
 12 not adequate, we consider there is a safety
 13 deficiency, and then each safety deficiency is
 14 assessed qualitatively for risk. The next
 15 step is that the risk control options are
 16 assessed.
 17 Now that sounds like a lot of process and
 18 it is, and the reason for that is that we
 19 absolutely have to be methodical, but we are
 20 also mindful of the need for speed where
 21 safety is concerned. This means if we uncover
 22 immediate risks to safety, we do not wait for
 23 the final report. We report on them right
 24 away. It may be by way of interim safety
 25 recommendations, as we did in the Ryan's

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1 Commander investigation, or we may choose to
 2 send out safety advisories or safety
 3 information letters to the regulator and
 4 industry. Where helicopters are concerned,
 5 over the past ten years, the TSB has issued
 6 many safety information letters and safety
 7 advisories in the course of the ongoing
 8 investigations. I am providing all of these
 9 to you for your consideration, sir.

10 A little more than a week into the Cougar
 11 491 investigation, the TSB revealed the
 12 failure of the damaged titanium studs on the
 13 main gearbox filter bowl assembly. This led
 14 the manufacturer to immediately replace the
 15 studs on these aircraft worldwide. But it
 16 didn't stop there. Fast on the heels of that
 17 came an FAA emergency airworthiness directive
 18 aimed at reducing the risk of a similar
 19 failure. These actions have led to reduced
 20 risk for S-92 operators early and while the
 21 investigation is ongoing. The big safety pay-
 22 off for us really occurs when everyone agrees,
 23 during the course of an investigation, about
 24 what needs to be done. Safety deficiencies
 25 are addressed quickly and rather than making

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1 recommendations, we report on the progress in
 2 our final report.

3 This being said, the TSB does not impose
 4 changes on the transportation industry or
 5 regulators. Solutions to safety are a shared
 6 responsibility amongst many players and our
 7 job is to make a convincing case for change.

8 I spoke in the opening about the indirect
 9 ways that your inquiry can influence the
 10 safety of helicopters operating in the
 11 offshore. I know you will look carefully at
 12 our public report on this accident. There you
 13 will find the Board's final word and its
 14 definitive findings as to the causes and
 15 contributing factors that led to this
 16 accident. I will draw your attention to
 17 Section 4, which as in all TSB Reports, will
 18 contain the Board's opinion on what needs to
 19 be done to advance aviation safety. Most TSB
 20 recommendations are made to the regulators
 21 like Canada's Department of Transport and the
 22 Federal Aviation Administration in the United
 23 States. The reason for this is if we find a
 24 safety deficiency, the fix should really apply
 25 to the whole industry worldwide. Changes to

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1 laws take time and many of our recommendations
 2 have not been fully implemented. Meanwhile, I
 3 would argue that nothing stops the offshore
 4 industry or the C-NLOPB from striving to reach
 5 a higher standard. For example, many in the
 6 oil and gas industry require subcontractors to
 7 maintain ISO standards, or to have integrity
 8 management systems. The regulator, the C-
 9 NLOPB in Newfoundland and Labrador, could
 10 require similar things. You could think about
 11 advising them on the setting of licence
 12 conditions for petroleum producers, or you
 13 might want to consider whether contract
 14 provisions for any carrier wishing to provide
 15 helicopter services in the offshore would be
 16 of value. In looking at what improvements
 17 should be made, a starting point may be TSB
 18 recommendations from our past investigations.
 19 If you think that might be useful, we would
 20 certain assist in that regard and provide you
 21 with the recommendations that may be on point.
 22 Helicopters operate worldwide and there are
 23 many strong players in aviation accident
 24 investigation. You may also wish to look at
 25 the work of international counterparts. In

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1 North America, the United States conducts a
 2 huge number of aviation investigations. Great
 3 Britain, Sweden, Norway, and Finland, the
 4 Netherlands, France, and Russia, all have
 5 excellent capabilities. In the far east,
 6 Japan, Korea, and Taiwan, are leaders, and
 7 down under, Australia and New Zealand, both
 8 excel at accident investigation. Now I would
 9 be pleased to answer your questions. If
 10 required, I would be happy to speak about the
 11 facts that we've published to date on the
 12 Cougar 491 accident, but in the interest of
 13 accuracy, I will not be providing detailed
 14 technical information or explanations beyond
 15 that scope. I'd also remind you that I will
 16 not be able to comment on any ongoing aspects
 17 of the investigation, but would be happy to
 18 speak in general terms about the TSB and its
 19 processes, and I thank you for your
 20 understanding in that regard.

21 COMMISSIONER:

22 Q. Thank you, Mrs. Tadros. I understand from Ms.
 23 Fagan that you have something to enter or
 24 there is something to be entered as an
 25 exhibit. This might be a good opportunity

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1 before you take questions and before you enter
 2 that exhibit for you to be sworn, and then
 3 we'll carry on.
 4 MS. WENDY TADROS (SWORN) EXAMINATION BY MS. ANNE FAGAN
 5 MS. FAGAN:
 6 Q. Thank you, Mr. Commissioner. Thank you, Mrs.
 7 Tadros. Mrs. Tadros and the TSB were kind
 8 enough to put together a package of documents.
 9 Those documents have been disclosed to the
 10 parties and their counsel, and they are now
 11 marked and we'd like to have them entered as
 12 Exhibits 1 through 10, and Mrs. Tadros
 13 referred to most of these exhibits as
 14 documents and her document number matches the
 15 exhibit number, and for the record, the first
 16 exhibit is the Annual Report to Parliament in
 17 French and in English and these will all be
 18 posted on the website for the public and for
 19 their convenience. Most of these documents
 20 would also be available on the TSB website,
 21 and other information is available on the TSB
 22 website. However, for ease of convenience, we
 23 will post them on our website under today's
 24 evidence. The second is the Canadian
 25 Transportation Accident Investigation and

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1 Safety Board Act, a long name, but the Act is
 2 there. The third is the Transportation Safety
 3 Board Regulations. The fourth is Annex 13, the
 4 International Convention on Civil Aviation
 5 Accident and Incident Investigation. Most of
 6 these are in French and English. The
 7 Convention is actually in a number of
 8 languages. The video that was played, in the
 9 event viewers would like to look at that video
 10 again, or any of the parties. The
 11 Investigation Process Pamphlet, that's number
 12 six. The video is number five. The Occurrence
 13 Classification Policy, which assists the Board
 14 in determining which occurrences they're going
 15 to investigate, that's number seven. The
 16 PowerPoint which includes the slides on the
 17 methodology is number eight. The Integrated
 18 Safety Investigation Methodology, the
 19 reference manual that explains that
 20 methodology, is nine. There is a long list of
 21 helicopter related safety advisories and
 22 safety letters, and that's number ten.
 23 COMMISSIONER:
 24 Q. Okay, thank you, these documents are entered
 25 now.

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1 MS. FAGAN:
 2 Q. Thank you. I was going to ask a few questions
 3 and then leave it to the group to see if
 4 anybody else would like to ask questions.
 5 COMMISSIONER:
 6 Q. Yes, okay then.
 7 MS. FAGAN:
 8 Q. Thank you very much for the information you've
 9 provided so far. We heard in the past few
 10 days about incidents and accidents, and if you
 11 would be good enough to explain or define, we
 12 don't need to drill down into an exact
 13 definition, whichever you believe is the best
 14 way to explain what is it that needs to be
 15 reported. I understand under the Act, I
 16 believe they use language "occurrence", and
 17 then occurrence is broken into "accident" and
 18 "incident". An accident may be fairly easy to
 19 understand, yet people may not have the right
 20 understanding, and an incident may even be a
 21 little bit more difficult to grasp. So if you
 22 could take us through what those concepts
 23 mean?
 24 MS. TADROS:
 25 A. Okay. I think the easiest way to do this is

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1 just to go through a short scroll of the Act
 2 and the Regulations, which I think you said
 3 were Documents 2 and 3.
 4 MS. FAGAN:
 5 Q. That's correct, the Act is 2, and the
 6 Regulations are 3.
 7 MS. TADROS:
 8 A. So if you take a look at Section 2 of the Act,
 9 there's a definition of aviation occurrence,
 10 and aviation occurrence includes an accident
 11 or incident associated with the operation of
 12 the aircraft.
 13 MS. FAGAN:
 14 Q. My colleague is gone to get the Registrar to
 15 pull up the Act.
 16 MS. TADROS:
 17 A. Okay, I'll just standby.
 18 MS. FAGAN:
 19 Q. She's multi-tasking, trying to post them on
 20 the website, and she'll be right in.
 21 COMMISSIONER:
 22 Q. I suppose most people may have the document in
 23 front of them, in any event, this binder.
 24 MS. FAGAN:
 25 Q. Most of them -- here she comes.

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1 REGISTRAR:
 2 Q. The exhibits have been delivered to the media
 3 room.
 4 COMMISSIONER:
 5 Q. Thank you.
 6 REGISTRAR:
 7 Q. You're welcome.
 8 MS. FAGAN:
 9 Q. We are looking for the Act, which is Document
 10 2.
 11 MS. TADROS:
 12 A. If you can scroll down to Section 2 there.
 13 MS. FAGAN:
 14 Q. Just another page or two.
 15 MS. TADROS:
 16 A. There we go.
 17 MS. FAGAN:
 18 Q. Occurrence, aviation occurrence is what we're
 19 -- okay. Your assistant can do this too.
 20 Once it's up, he can move.
 21 MS. TADROS:
 22 A. Okay.
 23 MS. FAGAN:
 24 Q. Let's go.
 25 MS. TADROS:

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1 A. Okay. So that's the definition of an aviation
 2 occurrence, and the aviation occurrence is the
 3 umbrella. Within that umbrella, we have
 4 accidents or incidents and you can see the
 5 definitions there, and they're fairly broad.
 6 MS. FAGAN:
 7 Q. And would you be good enough to read those
 8 definitions in because this is probably not
 9 being seen by the viewers on the webcast.
 10 MS. TADROS:
 11 A. Okay.
 12 MS. FAGAN:
 13 Q. They can't see what's here unless they have a
 14 split screen at home, which is very unlikely.
 15 MS. TADROS:
 16 A. Okay. An aviation occurrence means any
 17 accident or incident associated with the
 18 operation of an aircraft, and any situation or
 19 condition that the Board has reasonable
 20 grounds to believe could, if left unattended,
 21 induce an accident or incident described in
 22 Paragraph A. So then if we flip over a little
 23 bit to Section 3, the Act is really intended
 24 to set out what we can investigate, where the
 25 jurisdiction of the Board lies. So in Section

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1 3, we have this Act applies in respect of
 2 aviation occurrences, which we've just
 3 defined, and we have some of the geographic
 4 parameters. So in or over Canada, in or over
 5 any place that is under Canadian air traffic
 6 control, in or over any other place, if Canada
 7 is requested to investigate the aviation
 8 accident by an appropriate authority, or the
 9 aviation occurrence involves an aircraft in
 10 respect of which or that is operated by a
 11 person to whom a Canadian aviation document
 12 has been issued under Part I of the
 13 Aeronautics Act. So that's basically our
 14 jurisdiction. The next question that I think
 15 you posed had to do with what needs to be
 16 reported, and that's found in the Regulations,
 17 which is the next document.
 18 MS. FAGAN:
 19 Q. Number 3.
 20 MS. TADROS:
 21 A. Number 3. There's some definitions right up
 22 front in Section 2, and it's about half way
 23 along you'll find reportable aviation
 24 accident, John. There we go, yeah. So we
 25 have reportable aviation accident and

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1 reportable aviation incident, and they're
 2 rather long. Would you like them read into
 3 the record?
 4 MS. FAGAN:
 5 Q. No, but perhaps you could as best you can,
 6 just describe - the lawyers in the room may
 7 wish to read the definitions at a later time,
 8 but if you could just explain, so that the
 9 viewers would understand what an accident is
 10 and what an incident is, and then we could
 11 move into who has to report and the protocol
 12 for reporting.
 13 MS. TADROS:
 14 A. Okay. To make it really, really short, an
 15 accident is more serious, and an incident is
 16 less serious. So that's the basic
 17 demarkation.
 18 MS. FAGAN:
 19 Q. And what types of things would be an incident?
 20 I mean, I think an accident -- I think that
 21 might be fairly easy to understand, but what
 22 types of things would fall into an incident?
 23 MS. TADROS:
 24 A. Well, there's a whole list there in the
 25 definition. We've got engine failure or

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1 shutdown as a precautionary measure,
 2 transmission gear box malfunction, smoke or
 3 fire occurs, difficulty in controlling the
 4 aircraft, the aircraft fails to remain within
 5 the intending landing or take off area, and
 6 then there is another section on the crew
 7 duties related to the safe operation of the
 8 aircraft, if the crew are unable to perform
 9 those duties. We have incapacitation,
 10 depressurization, fuel shortage, the wrong
 11 type of fuel is put into the aircraft, a
 12 collision, a risk of collision, or a loss of
 13 separation, those are air traffic control
 14 terms. A crew member declares an emergency.
 15 If you have a helicopter with a slung load and
 16 it's released unintentionally. So these are
 17 just examples. The demarkation again with
 18 reportable aviation accident is the
 19 seriousness of what happens.
 20 MS. FAGAN:
 21 Q. Okay. So who has to report and to whom do
 22 they have to report, and I know you're
 23 speaking from the Transportation Safety Board,
 24 so who has to report to you, and what do they
 25 have to report, and when do they have to

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1 report it?
 2 MS. TADROS:
 3 A. Okay.
 4 MS. FAGAN:
 5 Q. That kind of thing.
 6 MS. TADROS:
 7 A. If we scroll down to Section 6 of the
 8 Regulations, if you have something that falls
 9 within the definitions that we just spoke
 10 about, then there's mandatory reporting under
 11 Section 6.
 12 MS. FAGAN:
 13 Q. So would that be accidents and incidents?
 14 MS. TADROS:
 15 A. Yes.
 16 MS. FAGAN:
 17 Q. Okay, and who would have to report?
 18 MS. TADROS:
 19 A. There's a list in there, and it includes the
 20 owner, operator, pilot in command, any crew
 21 member of the aircraft, and where the accident
 22 or incident involves a loss of separation or a
 23 risk of collision, any air traffic controller
 24 having direct knowledge of the accident or
 25 incident, shall report to the Board as much

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1 information as is listed in Subsection 2, as
 2 is available, as soon as possible and by the
 3 quickest means possible, so right away.
 4 MS. FAGAN:
 5 Q. And they have to report, and what we're
 6 interested in here really is helicopter
 7 transportation, and I realize you're speaking
 8 from all the aviation type terminology. I
 9 understand there is reporting requirements in
 10 the marine and the rail, and they would have
 11 different types of incidents. I understand
 12 they must report to the TSB. Do -- would this
 13 type of thing also have to be reported to
 14 anyone else, to the best of your knowledge,
 15 such as Transport Canada, or any other
 16 regulatory body?
 17 MS. TADROS:
 18 A. There may be separate reporting requirements
 19 for Transport Canada, but I can't speak in any
 20 kind of detail about those reporting
 21 requirements.
 22 MS. FAGAN:
 23 Q. I wouldn't expect you to be able to speak in
 24 detail. We understand that -- from Transport
 25 Canada that this type of activity would have

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1 to be reported to both authorities, both
 2 regulators, and one being the TSB. Is there
 3 any coordination or linkage or communication
 4 between the TSB and Transport Canada? Now
 5 you've said, of course, they're the regulator
 6 and your recommendations would go at the end
 7 of the day, quite often, if it's aviation,
 8 would certainly go to the Transport Canada
 9 aviation people because they are the
 10 regulator. What about from a reporting
 11 perspective before you even start your
 12 investigation?
 13 MS. TADROS:
 14 A. Well, in terms of reporting, the reporting
 15 requirements to the TSB are separate from the
 16 reporting requirements to Transport Canada.
 17 So we maintain carriage of all of the
 18 information that comes into the TSB, and the
 19 reason for that is our independence as an
 20 investigative body. There will be sharing of
 21 information when there is an accident,
 22 particularly a large accident, and the
 23 Minister has the option of appointing a
 24 Minister's observer to the investigation, and
 25 in that way there's a single point for the

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1 information to flow to Transport Canada.
 2 MS. FAGAN:
 3 Q. In addition to the reporting, what types of
 4 documents would you receive, either they're
 5 presented in a sort of proactive, somebody
 6 submits them, or you seek them out? What
 7 types of documents -- for example, from
 8 Transport Canada, what documents would you
 9 expect in a major accident where there's loss
 10 of life, what would you expect to receive, or
 11 what do you go collect?
 12 MS. TADROS:
 13 A. Well, this is speaking broadly, not about any
 14 particular accident, because the information
 15 that we would require would depend on the
 16 facts of the accident. So it would depend on
 17 what the investigators are looking for, but
 18 they would normally ask and receive all of the
 19 information that has to do with Transport
 20 Canada's interaction with that carrier. If
 21 air traffic control is involved, everything to
 22 do with the interaction between Transport
 23 Canada and the air traffic control system.
 24 MS. FAGAN:
 25 Q. What about the vehicle itself, whether it was

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1 the aircraft or the ship, would you -- you
 2 dealt with the carrier, and in our
 3 terminology, we use an air operator.
 4 MS. TADROS:
 5 A. Okay.
 6 MS. FAGAN:
 7 Q. Who's commuting passengers, so would I take it
 8 that the carrier -- if Transport Canada has a
 9 relationship with the air operator, especially
 10 if they issued the certificate, that
 11 information would come to you?
 12 MS. TADROS:
 13 A. Yes.
 14 MS. FAGAN:
 15 Q. You know, the communications back and forth.
 16 What about information with respect to the
 17 particular vehicle involved, let's say, an
 18 aircraft, what information would you get?
 19 MS. TADROS:
 20 A. If there's -- we would get whatever
 21 information Transport Canada has on that
 22 particular aircraft or on that aircraft type
 23 in terms of the certification of the aircraft.
 24 So we would receive -- we would ask for and
 25 receive all relevant information. You asked

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1 me about the aircraft itself in terms of the
 2 wreckage, is that what you wanted me to --
 3 MS. FAGAN:
 4 Q. Documentation on the -- you can go there as
 5 well, but the documentation on the aircraft
 6 from Transport Canada, and then anything else
 7 that you'd get, such as from the wreckage?
 8 What would you take in with respect to the
 9 aircraft?
 10 MS. TADROS:
 11 A. In terms of documentation?
 12 MS. FAGAN:
 13 Q. Yes.
 14 MS. TADROS:
 15 A. Well, we would want to know the number of
 16 hours, for instance, that the aircraft had
 17 been flown, but that would normally come from
 18 the carrier, not from Transport Canada, but we
 19 would want to know everything that they know
 20 about the operator and about that particular
 21 aircraft, if they have any information on it.
 22 So it's any relevant information.
 23 MS. FAGAN:
 24 Q. So if Transport Canada type certified an
 25 aircraft, you would look for the

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1 certification, the documents in connection
 2 with the certification, for example?
 3 MS. TADROS:
 4 A. Yes, if we were -- if we were looking at
 5 anything to do with the aircraft, we would
 6 want to know what issues arose during the
 7 certification, if any.
 8 MS. FAGAN:
 9 Q. You had mentioned that you work closely with
 10 the FAA, or there's a connection between the
 11 FAA. As I understand it, the FAA in the
 12 United States is the equivalent of Transport
 13 Canada, if you wanted to look at a
 14 counterpart. In the United States, what's the
 15 investigative arm in the United States, their
 16 division or branch? In Canada, it's the TSB.
 17 MS. TADROS:
 18 A. Okay. In the United States, the National
 19 Transportation Safety Board, and you've
 20 probably seen that on the news. You'll see
 21 NTSB. They are an independent body, as we
 22 are, and investigate -- they have a slightly
 23 different mandate, but they investigate in
 24 much the same way that we do.
 25 MS. FAGAN:

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1 Q. Would the TSB interact, you'd mentioned
 2 earlier, with the manufacturer? Could you
 3 give us an example or -- I guess, an example
 4 or a situation, or what type of interaction?
 5 I mean, is it a phone call, or would you
 6 physically go to see the manufacturer? I
 7 mean, how far does the TSB go with
 8 investigating or interviewing manufacturers of
 9 the equipment that was in the accident?
 10 MS. TADROS:
 11 A. Well, there's really two things that can
 12 happen. We can interview the manufacturer,
 13 but the manufacturer can also work with the
 14 investigation, if there are specific things
 15 that need to be known about that machine. I
 16 think that you can appreciate that there are
 17 many, many different aircraft operating in the
 18 world, and so when you're investigating a
 19 particular aircraft, as we were with Swissair,
 20 the manufacturer has all of the as-builts, if
 21 you will. They have all of the drawings, they
 22 know where every wire was placed in the
 23 aircraft, so we work very closely with the
 24 manufacturer. They provide us with the
 25 information that they have.

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1 MS. FAGAN:
 2 Q. Do you work -- if the accident occurs in
 3 Canada, then the TSB would have the exclusive
 4 jurisdiction, is that correct?
 5 MS. TADROS:
 6 A. Correct.
 7 MS. FAGAN:
 8 Q. So the NTSB, the investigative arm, the US
 9 equivalent, would they be involved in the
 10 accident -- in your investigation in any way,
 11 if it was an American aircraft?
 12 MS. TADROS:
 13 A. They would have the right under international
 14 agreements to appoint accredited
 15 representatives.
 16 MS. FAGAN:
 17 Q. And what do the accredited representatives do
 18 in that -- where are they physically? Are
 19 they sent information by e-mail, are they
 20 physically part of the field or the reporting
 21 phase? Where do they come in in the
 22 investigation?
 23 MS. TADROS:
 24 A. They may do both. They may attend on site,
 25 they may attend group meetings, they maybe

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1 sent information off site, but they are kept
 2 apprised of the investigation as it moves
 3 forward, and the reason they're doing that,
 4 for instance, with the NTSB, that's the state
 5 of manufacture, and there's an interest there.
 6 They want to keep on top of all the safety
 7 issues as they're coming out in the
 8 investigation. So that's their primary
 9 interest.
 10 MS. FAGAN:
 11 Q. So they might be there, the manufacturer may
 12 be a representative or an observer, they may
 13 have a similar type role in that -- they may
 14 be there. You mentioned supervised, of
 15 course.
 16 MS. TADROS:
 17 A. Yes.
 18 MS. FAGAN:
 19 Q. But they have been there as part of the --
 20 MS. TADROS:
 21 A. Well, I'll give you an example. If you're
 22 dealing with an engine and you have to do a
 23 tear down of an engine, then there are a
 24 number of people who would attend that tear
 25 down and observe, and one of them would be the

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1 company that manufactured the engine.
 2 MS. FAGAN:
 3 Q. When it comes to coordination and exchange of
 4 information, I understand the TSB has the
 5 exclusive jurisdiction. Sometimes with
 6 accidents you may end up with a police force,
 7 for example, also involved in some aspect of
 8 the accident. Could you explain how that
 9 works physically if, say, the RCMP is there?
 10 You've said DND can -- the Department of
 11 National Defence, they can investigate on
 12 their own, but let's just say it's a police
 13 force and it's the TSB?
 14 MS. TADROS:
 15 A. Okay, let's say it's a civilian aircraft. The
 16 best example of this was Swissair 111. In the
 17 early days of an accident, you don't always
 18 know whether there was a criminal act or not.
 19 So we work in tandem and we have a very good
 20 relationship with the RCMP, and sometimes they
 21 have a lot more resources than we have, so we
 22 work in tandem until a decision is made about
 23 whose jurisdiction -- primary jurisdiction it
 24 would be. So if it is determined absolutely
 25 from a scientific perspective that it wasn't a

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1 criminal act, then the RCMP will drop off and
 2 we will continue. If it is determined there
 3 was a criminal act, then we will drop off and
 4 the RCMP will continue, and that's what
 5 happened in the situation with Air India.
 6 MS. FAGAN:
 7 Q. Because a criminal act, for example, would be
 8 a bomb or some type of sabotage?
 9 MS. TADROS:
 10 A. Yes, they're good example.
 11 MS. FAGAN:
 12 Q. So if that was the cause, then RCMP would use
 13 its labs and its personnel and take the --
 14 take over the accident. Would that be fair,
 15 or does TSB -- are you still involved, or are
 16 they the lead?
 17 MS. TADROS:
 18 A. They're the lead and we wouldn't be
 19 investigating for causes and contributing
 20 factors once it had been determined that it
 21 was a criminal act, but we may assist them.
 22 For instance, in Air India, it was the TSB
 23 investigator who determined that it was a bomb
 24 on board the aircraft. It's up to the RCMP to
 25 decide whether they're going to conduct a

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1 further criminal investigation and prosecute.
 2 MS. FAGAN:
 3 Q. The Department of National Defence, I
 4 understand that's sort of a separate -- how
 5 does that work?
 6 MS. TADROS:
 7 A. They investigate their own accidents.
 8 MS. FAGAN:
 9 Q. So if there's an accident with DND aircraft,
 10 they have the jurisdiction to investigate
 11 their own accidents and they have a group of
 12 very capable investigators.
 13 MS. FAGAN:
 14 Q. You had mentioned that you have 235 people.
 15 Are they all at headquarters or is the 235 at
 16 headquarters and in those fields, sort of
 17 satellite offices or branch offices that were
 18 on the slide?
 19 MS. TADROS:
 20 A. It's 235 all the way across the country. So
 21 it's a very small organization with a very big
 22 mandate, if you will, and the reason that we
 23 have people across the country is we have to
 24 be able to deploy quickly to accident sites
 25 all over Canada.

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1 MS. FAGAN:
 2 Q. So for the Atlantic region, where would the
 3 field office be?
 4 MS. TADROS:
 5 A. Halifax.
 6 MS. FAGAN:
 7 Q. Halifax. And do you know approximately how
 8 many people there are in the field office in
 9 Halifax? Or just a sense, we have 235, sort
 10 of how are they spread across?
 11 MS. TADROS:
 12 A. Well, the decisions are made about who will be
 13 in our regional office based on the modes
 14 (phonetic), so in Halifax we have aviation
 15 expertise, we have marine expertise and we
 16 have rail expertise. In some other offices,
 17 for instance on the Prairies, we don't have
 18 too much marine expertise.
 19 MS. FAGAN:
 20 Q. And what happens when there is an accident, I
 21 mean, Newfoundland and Labrador, like many
 22 jurisdictions where we seem to have a fair
 23 number of accidents, not only in aviation, in
 24 the marine area it seems to be fairly, fairly
 25 constant in the news.

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1 MS. TADROS:
 2 A. Yes.
 3 MS. FAGAN:
 4 Q. So you have your field office, could you just
 5 take us through, I mean there's a--I wouldn't
 6 want to say a skeleton group, but there's a
 7 group of experts there. Now there's some
 8 major accident or catastrophe, how does it
 9 work? Do people from Ottawa or the main
 10 office or other jurisdictions come to support?
 11 MS. TADROS:
 12 A. If there's a big investigation, like Swissair
 13 111, we will pull on our people from across
 14 the country. In a situation with Cougar 491,
 15 the two investigators from our Halifax office
 16 deployed immediately and they were joined by
 17 experts from head office. So it really
 18 depends on the accident and the investigator
 19 in charge, what his needs are.
 20 MS. FAGAN:
 21 Q. The facilities, could you just elaborate a
 22 little bit more on the types of people, the
 23 credentials, I mean, are the people that--are
 24 they in laboratories, do they have Ph.D's,
 25 what types of equipment do you have,

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1 especially in an aviation, you know, the
 2 Swissair was a major catastrophe. We hear,
 3 although not able to look at the 491 accident,
 4 that's your jurisdiction, but what types of
 5 equipment and what types of expertise would be
 6 brought in an aviation type accident?
 7 MS. TADROS:
 8 A. Whatever type of expertise we require and if
 9 we don't have that expertise, we can borrow
 10 from National Research Council or several
 11 other bodies, but normally we do have the
 12 expertise and in an aviation occurrence, you
 13 would have people with an operation's
 14 background, so you would have pilots. If you
 15 have something like a near miss, you have air
 16 traffic control specialists, people who've
 17 actually been air traffic controllers and know
 18 how the system works. You have people with
 19 maintenance background, so you have AMES who
 20 understand the physical make up of the
 21 aircraft. You have lots and lots of engineers
 22 and they may be specialists in fire, they may
 23 be specialists in metallurgy. We have human
 24 performance experts who look at the
 25 interaction between the person and the

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1 machinery and all of the factors that can
 2 impact on that, on those dynamics. We have
 3 chemists, we have practically every scientific
 4 background that you can imagine and within
 5 those backgrounds they are sub, sub, sub
 6 specialized.
 7 MS. FAGAN:
 8 Q. The recorders, they're often referred to as
 9 the "black box".
 10 MS. TADROS:
 11 A. Yes.
 12 MS. FAGAN:
 13 Q. Could you just describe the process, where
 14 that goes, where is it and I understand that
 15 information is privileged, but I'd just like
 16 for just a general understanding and an answer
 17 as to--I understand that information is never
 18 released, but could you just explain what
 19 happens to that recording, where are they and
 20 what happens to them.
 21 MS. TADROS:
 22 A. Okay, what people refer to as the "black box"
 23 actually has two components and sometimes they
 24 are together and sometimes they are separated,
 25 but you have a flight data recorder which

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1 records parameters on the aircraft and
 2 depending on how sophisticated that recorder
 3 is. There will be more parameters the more
 4 sophisticated the recorder is, so it's
 5 recording more things. There's also the
 6 cockpit voice recorder and that records not
 7 only the voices in the cockpit, but any sounds
 8 that may be heard. So for instance, they will
 9 be looking for whether certain instruments
 10 were activated by the sounds that they can try
 11 to pick up off of the recorder and it's the
 12 CVR or the cockpit voice recorder that's
 13 privileged. The reason for that is the same
 14 reason that the witness statements are
 15 protected, it is because we want to have this
 16 information for future investigations, so in
 17 Canada, in particular, that's a very important
 18 principle.
 19 MS. FAGAN:
 20 Q. I understand in the Swissair, I believe, in
 21 some accidents you will hear that the recorder
 22 stopped or there wasn't enough--the tape
 23 stopped. Are there recommendations out there
 24 or how does that come about? Is there
 25 equipment that now allows the tapes to run

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1 right through or do the tapes still stop?
 2 MS. TADROS:
 3 A. The tapes still stop from time to time and
 4 when they do, we have to set about trying to
 5 figure out why. But in answer to your
 6 question about the recommendations, there were
 7 recommendations in the Swissair investigation
 8 that dealt with recorders. One recommendation
 9 pertained to the length of time when the
 10 recorder will record, and our recommendation
 11 is that that be bumped up from 30 minutes to
 12 two hours, so that--there may be a
 13 misunderstanding that you only want the
 14 information right around the occurrence, but
 15 in fact, investigators want to know all of the
 16 preceding events because there may be
 17 something they can learn in the first ten
 18 minutes that will help them understand at the
 19 very end. So that's the one recommendation.
 20 The second recommendation deals with the power
 21 supply to recorders and the recommendation
 22 asks that there be separate power supplies, so
 23 that if one stops, the other doesn't
 24 automatically stop.
 25 MS. FAGAN:

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1 Q. You had said that in the flight 491 accident,
 2 the FAA issued an emergency airworthiness
 3 directive.
 4 MS. TADROS:
 5 A. That's correct.
 6 MS. FAGAN:
 7 Q. You also said that the TSB informs the FAA, is
 8 that correct? Did I miss something? How did
 9 that come about, I mean I'm getting at the
 10 reporting and the communication and quite
 11 often you may be investigating an aircraft
 12 that's manufactured somewhere other than in
 13 the United States or in Canada and there's the
 14 manufacturing certified authority, and we've
 15 heard yesterday that the airworthiness
 16 directives usually come from the original
 17 certified authority from the country which
 18 typed certified the aircraft from a design
 19 manufacturer perspective.
 20 MS. TADROS:
 21 A. From the state of manufacturer, yes.
 22 MS. FAGAN:
 23 Q. State of manufacturer. So could you explain
 24 the reporting or the interaction between the
 25 TSB and that state of manufacturer?

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1 MS. TADROS:
 2 A. Well I can tell you what it normally would be,
 3 something would be drafted up outlining what
 4 the safety deficiency was that was found and
 5 it would be sent off. But in the case of this
 6 investigation, it happened much more quickly
 7 is my understanding and we spoke earlier about
 8 the team being on site, together with the
 9 accredited representatives and the observers
 10 and apparently this is what happened in the
 11 situation when the stud was discovered is that
 12 the key people were there and so action was
 13 taken very quickly. We didn't actually put
 14 out a long description of what the problem was
 15 because the people who needed to know, knew
 16 immediately what the problem was.
 17 MS. FAGAN:
 18 Q. You mentioned that you keep the survivors and
 19 next of kin informed. How do you go about
 20 that, do you send letters or do you work
 21 through counsel or do you offer that and then
 22 leave it up to the next of kin or survivors or
 23 other passengers to contact the TSB?
 24 MS. TADROS:
 25 A. Well in the case of a large accident, we have

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1 one person whose job it is to do that, they
 2 are dedicated to keep in touch with the
 3 families and so all of the communication goes
 4 through that one person and they work at the
 5 board.
 6 MS. FAGAN:
 7 Q. Commissioner, I have a couple of more
 8 questions and I know we've had a break, so I
 9 don't know what your wish is. I know I've run
 10 past--10:45 is the normal break time, so I
 11 don't know if you want to -
 12 COMMISSIONER:
 13 Q. If you just have a couple more questions, why
 14 not do that then.
 15 MS. FAGAN:
 16 Q. Only have a few more questions, okay. On your
 17 investigative methodology and then you're
 18 reporting. Do you--I know you don't assign
 19 fault, but in the report itself, do you--are
 20 there different categories in that there may
 21 be--you may determine that something caused
 22 the accident, but you may make other findings
 23 or have other recommendations that aren't
 24 related to the cause, are there different
 25 categories?

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1 MS. TADROS:
 2 A. Okay, I think there's really two questions
 3 there. Yes, in the report there are three
 4 categories of findings. The first is finding
 5 as to causes and contributing factors, and
 6 those are things that have been demonstrated
 7 to have played a role in the accident. The
 8 second is findings as to risk and those
 9 findings are things that have not necessarily
 10 played a role in the accident, but they're
 11 risks in the system. So we would make
 12 findings on all of those. We may make
 13 recommendations on them if something needs to
 14 be done that we learn along the way. And the
 15 third is other findings and those are really
 16 more minor. They're designed sometimes to put
 17 an issue to rest. If any issue has come up in
 18 an investigation and it's being publicly
 19 discussed, then if we find that it didn't play
 20 a role, we will say so, or other factual
 21 information that we feel should be in the
 22 findings. So that was, I think, the second
 23 question that you asked. The first question
 24 that you asked was about blame and there is a
 25 section in our Act that basically says it is

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1 not the role of the Board to assign fault or
 2 blame, but that we should not hesitate to
 3 report on anything that may infer blame.
 4 Those aren't the exact words, but that is the
 5 general idea, so we still have to report
 6 everything that we learn, everything that we
 7 find. If somebody else infers blame from
 8 that, well then that's their business, but the
 9 purpose of the investigation is not to assist
 10 that process.

11 MS. FAGAN:
 12 Q. One of the last areas is with respect to the
 13 report and I understand that you issue a
 14 report but that it's not the final report,
 15 that there's an interaction or an opportunity
 16 for feedback for the interested parties to
 17 maybe contest or bring other information
 18 forward. What is distributed and who receives
 19 the draft report, and I don't know if that's
 20 what it's called, but the section before it's
 21 going to be final, can you explain who is
 22 going to get it and what's in it?

23 MS. TADROS:
 24 A. Okay, the people who receive the draft report
 25 are designed reviewers and those are persons

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1 or corporations with a direct interest. And
 2 the reason that we circulate the draft report
 3 is for two purposes. One is to satisfy
 4 fairness, which you understand in law what
 5 that means, and the second is to ensure the
 6 accuracy of the report. So in a sense, it's a
 7 form of scientific challenge and if there's
 8 anything that isn't correct in that report, we
 9 want to know about it, we'd go back and take
 10 another look at it and a decision will be made
 11 as to whether that point of view is valid or
 12 not.

13 MS. FAGAN:
 14 Q. If there are certain findings in the draft
 15 report, does that also include the grounds or
 16 the information upon which that finding--I
 17 mean, how much do the designated reviewers get
 18 in order to determine, there may be some
 19 things which they know, look, that's not true.
 20 There may be some obvious things where they
 21 know that's not true, they have it wrong. But
 22 how much information is there so that these
 23 designated reviewers can make that assessment?

24 MS. TADROS:
 25 A. What we would normally send them is the draft

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1 report and any of the engineering laboratory
 2 reports that are produced in support of the
 3 draft support. They are entitled, if they
 4 wish, to have any information on the
 5 investigation that is public.

6 MS. FAGAN:
 7 Q. Are the designated reviewers the same people
 8 who are observing or could they be different
 9 groups or could there be some overlap? For
 10 example, the manufacturer or let's say the
 11 people who are involved, it might be an
 12 American manufacturer, maybe the American
 13 investigative body is there, maybe the
 14 operator might be there, there may be a number
 15 of people who are sort of the stakeholders who
 16 are interested in the process, are they the
 17 same people as the designated reviewers or is
 18 the groups different?

19 MS. TADROS:
 20 A. They're not necessarily, but you're pretty
 21 close.

22 MS. FAGAN:
 23 Q. There's some overlap.

24 MS. TADROS:
 25 A. There's some overlap. So, normally in

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1 aviation investigation, the manufacturer, if
 2 it's a foreign manufacturer, then that state,
 3 the pilot, the co-pilot or their next of kin
 4 would normally be designated reviewers; the
 5 company, the regulator, those are all
 6 examples. When you talk about manufacturer,
 7 you have many portions of aircraft are
 8 manufactured by different companies, so the
 9 actual aircraft may be manufactured by one
 10 company, the engines may be manufactured by
 11 another company or some component within the
 12 avionics may be manufactured by another
 13 company. So you're dealing with anybody whose
 14 product or behaviour may be commented on.

15 MS. FAGAN:
 16 Q. What happens when the draft report goes out
 17 and then you wait for response? What's the
 18 process after you receive the response or the
 19 feedback from the designated reviewers?

20 MS. TADROS:
 21 A. It's a very time consuming process, I can tell
 22 you that because we go through each and every
 23 comment, so on a small investigation--well it
 24 doesn't necessarily depend on the size of the
 25 investigation because you may get a very small

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1 accident where people are quite interested and
 2 you may get hundreds and hundreds of comments,
 3 but I think at the top range we would have a
 4 thousand to twelve hundred comments on a
 5 particular report, that would be at the very
 6 top range. At the lower end of the scale, the
 7 report maybe totally accepted and not disputed
 8 at all. So we go through each and every one
 9 of those and we provide the answer to each and
 10 every one to the individual that commented.

11 MS. FAGAN:
 12 Q. And then you--I mean, could sometimes the
 13 comments result in the requirement to conduct
 14 further investigation or further interaction?

15 MS. TADROS:
 16 A. Yes, they could--it could result in further
 17 investigation in order to determine if you
 18 have opposing viewpoints on a particular piece
 19 of machinery, for instance, the investigators
 20 will have to figure out which one is right.
 21 So that may require further investigation. If
 22 the report drastically changes, then it may
 23 have to be circulated again.

24 MS. FAGAN:
 25 Q. To everybody?

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1 MS. TADROS:
 2 A. Yes.

3 MS. FAGAN:
 4 Q. What's the timing and I know, I guess we're
 5 looking at a huge range between the--for the
 6 type of accident, but this process appears to
 7 be very involved and time consuming, so what
 8 would the expectation be for the final report?
 9 I mean, this draft process, does this take--if
 10 the draft goes out, is it 60 days later, 30
 11 days later, six months later and it may be
 12 impossible to gauge.

13 MS. TADROS:
 14 A. Well the report can go out for 30 days or 60
 15 days, depending, but in that range and often
 16 we're asked for extensions if it's a very
 17 complex report and if the person who is
 18 commenting wants to do some research on their
 19 own, we'll be asked for an extension.
 20 Normally the comments would come back within
 21 30 or 60 days and then depending on how many
 22 of them there are and whether there's further
 23 investigation, that process can take anywhere
 24 from a month to five, six months.

25 MS. FAGAN:

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1 Q. So from start to finish, you have your
 2 accident and then you have your final report,
 3 I take it that process would take more than a
 4 year if you have six months between the draft
 5 and the coming back and forth--and I know it
 6 may be impossible, but even a range as to, on
 7 average or how long does it take to get that
 8 final report?

9 MS. TADROS:
 10 A. To get the final report out to the public, it
 11 could take anywhere from, for a fairly
 12 straightforward investigation, it could take
 13 eight months to a year; for our largest
 14 investigation thus far, Swissair, it was four
 15 and a half years, but I think you can
 16 appreciate that that was a very, very complex
 17 investigation and the field phase itself, the
 18 recovery of the wreckage took more than a
 19 year.

20 MS. FAGAN:
 21 Q. We have had the concepts of a culture, a
 22 safety culture and you had indicated that the
 23 main mandate--I may have it wrong, but the
 24 main mandate is to improve and enhance safety,
 25 I mean, that's the goal at the end of the day.

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1 MS. TADROS:
 2 A. Yes.

3 MS. FAGAN:
 4 Q. And this Inquiry is looking for ways to
 5 improve safety and one of the things that has
 6 been brought forward is encouraging and
 7 promoting a safety culture. Just ask if you
 8 comment on that concept and if there's any
 9 suggestions or recommendations as to how that
 10 can be promoted?

11 MS. TADROS:
 12 A. Very, very complex field and this is part of
 13 what we look at when we look at organizational
 14 factors. And you've probably heard about
 15 safety management systems, but encouraging or
 16 promoting a safety culture is part and parcel
 17 of safety management systems and there's been
 18 much written on safety management systems, but
 19 I think it's definitely something that you
 20 should look at.

21 MS. FAGAN:
 22 Q. That would be all the questions that I would
 23 have and I don't know if the Commissioner
 24 would like to break and then give the parties
 25 an opportunity -

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1 COMMISSIONER:
 2 Q. Yes, we'll take a break now and we'll have
 3 questions from the group.
 4 MS. FAGAN:
 5 Q. Thank you, Ms. Tadros.
 6 (RECESS)
 7 COMMISSIONER:
 8 Q. Now then we'll take questions from the group
 9 to Mrs. Tadros, and I have the list here. We
 10 would begin with counsel for C-NLOPB, Ms.
 11 Crosbie.
 12 MS. CROSBIE:
 13 Q. We have no questions, thank you.
 14 COMMISSIONER:
 15 Q. Okay, thank you. Counsel for Transport Canada?
 16 MR. FREEMAN:
 17 Q. We also have no questions. We simply thank
 18 Madam Tadros for her presentation today.
 19 COMMISSIONER:
 20 Q. All right, thank you. Mr. Brown, counsel for
 21 CAPP is not here, is he? No. Okay, and
 22 counsel for the operators.
 23 MACDONALD, Q.C.:
 24 Q. No questions.
 25 COMMISSIONER:

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1 Q. Ms. Strickland.
 2 MS. STRICKLAND:
 3 Q. No questions at this time for HMDC.
 4 COMMISSIONER:
 5 Q. Okay, thank you.
 6 MR. WALLACE:
 7 Q. No questions, Mr. Commissioner.
 8 COMMISSIONER:
 9 Q. No questions, all right, thank you. Mr.
 10 Whalen for Cougar.
 11 WHALEN, Q.C.:
 12 Q. No questions, thank you, Mr. Commissioner.
 13 COMMISSIONER:
 14 Q. Counsel for Sikorsky is not here. Counsel for
 15 Helly Hansen, I think, is not here. Oh, you
 16 are.
 17 MR. SPENCER:
 18 Q. We have no questions at this time.
 19 COMMISSIONER:
 20 Q. Thank you, and for Memorial University.
 21 HURLEY, Q.C.:
 22 Q. Yes, we have no questions at this time.
 23 COMMISSIONER:
 24 Q. Thank you. For the Government of Newfoundland
 25 and Labrador.

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1 MR. PRITCHARD:
 2 Q. Mr. Commissioner, no questions, thank you.
 3 COMMISSIONER:
 4 Q. Okay, thank you. Mr. Harris is not here.
 5 Counsel for -- yes, Mr. Earle, counsel for the
 6 CEP, the union.
 7 EARLE, Q.C.:
 8 Q. Yes, thank you, Mr. Commissioner. No
 9 surprise, we have questions as usual.
 10 MS. WENDY TADROS - EXAMINATION BY RANDY EARLE, Q.C.
 11 EARLE, Q.C.:
 12 Q. Good morning, Ms. Tadros. I'm Randell Earle.
 13 As the Commissioner indicated, I represent CEP
 14 Local 2121, and 2121 is the bargaining agent
 15 for the employees on the Hibernia Platform and
 16 the Terra Nova FPSO. So what you're looking
 17 at is the questioner on behalf of probably a
 18 majority of the passengers who use helicopter
 19 transport to and from their workplaces, and
 20 clearly these people are extremely interested
 21 in the work of the Transportation Safety
 22 Board. My first question for you, and I think
 23 many of my questions will be almost by way of
 24 confirming things that are implicit in what
 25 you said earlier, but am I correct in saying

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1 that the work of the Transportation Safety
 2 Board is occurrence driven?
 3 MS. TADROS:
 4 A. Yes, but I would add a caveat. We have the
 5 capacity and we have done what we call Class 4
 6 investigations, and those are investigations
 7 that are not driven by any particular
 8 accident, but when we do investigations of
 9 particular accidents and realize there may be
 10 an issue in the system, as a whole, we can
 11 look into those safety issues. For instance,
 12 at the moment we are doing safety issues
 13 investigation on fishing vessel safety. So we
 14 have done a number of investigations over the
 15 last number of years, over the last 20 years,
 16 and we have got to the bottom of the causes
 17 and contributing factors of each of those, but
 18 the Board feels that there is an issue in the
 19 industry as a whole, and so we are doing an
 20 investigation of the those issues.
 21 EARLE, Q.C.:
 22 Q. Would I be fair in saying, though, that even
 23 that investigation is, if you will, derivative
 24 from previous occurrences and things you have
 25 identified during the course of investigations

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1 in previous occurrences?
 2 MS. TADROS:
 3 A. Yes. I mean, it's issue driven, it's fact
 4 driven. You have to be able to determine that
 5 there is an issue there, that there's a safety
 6 issue that warrants a further look before you
 7 take a further look.
 8 EARLE, Q.C.:
 9 Q. You mentioned to Ms. Fagan in response to her
 10 question about the culture of safety, that you
 11 felt that would be a profitable area -- I
 12 don't think you used the word "profitable",
 13 but a good area for the Inquiry to direct --
 14 MS. TADROS:
 15 A. Yes, not specifically the culture of safety,
 16 but that falls under the rubric of safety
 17 management systems.
 18 EARLE, Q.C.:
 19 Q. The whole business of safety management?
 20 MS. TADROS:
 21 A. Yes.
 22 EARLE, Q.C.:
 23 Q. And would you agree with me that the modern
 24 approach to safety management is one of
 25 proactive management, seeking towards best

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1 practises, and the challenging of standards to
 2 see that they can be improved?
 3 MS. TADROS:
 4 A. I don't disagree with that, but there are
 5 really three prongs to safety management
 6 systems, and they are proactive means of
 7 managing safety. The first prong is hazard
 8 identification, proactive hazard
 9 identification within a company. The next is
 10 risk analysis and assessment, and then risk
 11 mitigation. So basically the idea is that you
 12 take a look at the hazards that are out there
 13 and you address them before they result in an
 14 accident, and you have to appreciate that
 15 that's a very simplistic precis.
 16 EARLE, Q.C.:
 17 Q. Yes, I appreciate that. In essence, the
 18 objective should be to keep you unemployed.
 19 MS. TADROS:
 20 A. That's my very best dream, sir.
 21 EARLE, Q.C.:
 22 Q. So in the scheme of things, given that your
 23 work is occurrence driven, and that you make -
 24 - this is not to suggest in the investigation
 25 of an occurrence you may not in the end make

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1 significant recommendations relative to safety
 2 management, but given that the work of the
 3 Transportation Safety Board is occurrence
 4 driven, in the regulatory scheme and the
 5 investigatory scheme as it relates to
 6 transportation, who does the Transportation
 7 Safety Board see as the body or regulator that
 8 has the burden, if you will, of moving forward
 9 safety management so that we don't have
 10 occurrences that bring Transportation Safety
 11 Board into the picture?
 12 MS. TADROS:
 13 A. In Canada, the regulator is Transport Canada,
 14 and Transport Canada is the body that is
 15 requiring air carriers to implement safety
 16 management systems, but just to go back to a
 17 point that you made in the beginning of your
 18 question, to comment on the notion that if you
 19 have safety management systems, that you have
 20 no accidents, I don't think that that's true.
 21 EARLE, Q.C.:
 22 Q. No.
 23 MS. TADROS:
 24 A. I think that transportation systems are very,
 25 very complex and the interactions between

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1 humans and the machine are very complex, and
 2 hopefully the accidents can be brought down,
 3 but I'm not sure, as long as you have
 4 transportation and you have things moving,
 5 that you can get to a zero accident rate.
 6 EARLE, Q.C.:
 7 Q. Yes. So if our objective is not to see that
 8 you're unemployed, it's that you're an awful
 9 lot less busy. There is in Canada, I'm sure
 10 that you're totally aware of it, a large
 11 regime, both federal and provincial, dedicated
 12 to occupational health and safety.
 13 MS. TADROS:
 14 A. Yes.
 15 EARLE, Q.C.:
 16 Q. Where would you see that regime fitting into
 17 the process of safety management, vis-a-vis,
 18 helicopter transportation safety?
 19 MS. TADROS:
 20 A. Well, let's be clear that under the
 21 Constitution, aviation is federal. So the
 22 regulator is a federal body, Department of
 23 Transport. So that any direct regulation of
 24 anything in the aviation industry is going to
 25 fall to the Department of Transport. What

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1 some other bodies can do is work indirectly to
 2 benefit aviation safety.
 3 EARLE, Q.C.:
 4 Q. Uh-hm. Would you not agree, though, that the
 5 constitutional structure of Canada gives to
 6 the federal government those ancillary
 7 jurisdictions like occupational health and
 8 safety when you are dealing with a matter
 9 which is within the constitutional competence
 10 of the federal government, so that there is
 11 room for a federal occupational health and
 12 safety regime to interact with air safety, for
 13 instance?
 14 MS. TADROS:
 15 A. Yes, it does get very complex, doesn't it?
 16 For instance, if you're looking in the marine
 17 world and you're looking at fishing vessels
 18 again, there are some aspects of fishing
 19 vessel operation that are provincial and fall
 20 under Workers Compensation type structures,
 21 and there are others that are federal.
 22 EARLE, Q.C.:
 23 Q. And, of course, we have the added complication
 24 in this particular situation that we have
 25 joint and overlapping jurisdiction when it

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1 comes to the offshore exercise on behalf of
 2 the two governments by our friends at C-NLOPB.
 3 Now the whole business of incidents is
 4 something that I'd like a little bit more
 5 information on, and that is the process of
 6 dealing with incidents and what comes out of
 7 an incident, and I was very interested when
 8 you went through the definitions that it
 9 includes such things as fuel shortages, and
 10 I'm going to put to you a factual situation to
 11 see if we've got the triameters right. This,
 12 I gather, is not a totally unusual event, but
 13 a helicopter may leave St. John's headed to
 14 one of the offshore installations with a
 15 certain amount of fuel on. The fuel on board
 16 is calculated for what is often called "the
 17 necessity of boomeranging", i.e. going out and
 18 coming back without landing. Weather
 19 conditions change. So deicing equipment is
 20 activated, and as I understand it, that
 21 changes the parameters of fuel consumption.
 22 It means that a decision is required to turn
 23 around and essentially abort the trip and
 24 return to St. John's. Would that be
 25 considered an incident?

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1 MS. TADROS:
 2 A. If the trip was aborted or if there wasn't
 3 enough fuel on board?
 4 EARLE, Q.C.:
 5 Q. The trip is aborted because weather conditions
 6 had changed and there is now not enough fuel
 7 to get -- safely go to the platform and
 8 contemplate possibly not being able to land at
 9 the platform and return to St. John's without
 10 landing. Would that be considered an
 11 incident?
 12 MS. TADROS:
 13 A. Just to be clear, you're telling me that there
 14 is enough fuel to get back to land?
 15 EARLE, Q.C.:
 16 Q. There is enough fuel to get back to land, and
 17 the decision is made to get back to land
 18 because there will not be enough fuel if the
 19 original intention is carried out?
 20 MS. TADROS:
 21 A. Okay, just bear with me for a minute.
 22 EARLE, Q.C.:
 23 Q. Sure.
 24 MS. TADROS:
 25 A. Well, the definition of reportable aviation

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1 incident in Paragraph H says, "A fuel shortage
 2 occurs that necessitates a diversion or
 3 requires approach and landing priority at the
 4 destination of the aircraft". So it's a
 5 question of whether coming back to St. John's
 6 is a diversion or it's part of the original
 7 planning.
 8 EARLE, Q.C.:
 9 Q. Okay.
 10 MS. TADROS:
 11 A. So if it's part of the original planning that
 12 when you're heading out in the North Atlantic
 13 that you may have to come back, then my view
 14 is it's not a diversion.
 15 EARLE, Q.C.:
 16 Q. Okay. So that wouldn't be an incident, but I
 17 take it that if part way out the pilot
 18 recognized that for some reason or other,
 19 whether it was because of a miscalculation or
 20 a wrong assumption on somebody's part, there
 21 is not enough fuel on board to meet this
 22 boomerang parameter of being able to go out
 23 and come back, so the trip is aborted part way
 24 out and back they come, that would very
 25 clearly be an incident?

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1 MS. TADROS:
 2 A. Reportable, yes.
 3 EARLE, Q.C.:
 4 Q. Reportable.
 5 MS. TADROS:
 6 A. And let's go back to the purpose of why we
 7 have reportable incidents. We want to know at
 8 the TSB whether we should deploy and consider
 9 doing an investigation, or if we're not going
 10 to do that, we want the data so that, say,
 11 there are a hundred such incidents reported in
 12 a two year period and they're not investigated
 13 because each of them are minor, we want to
 14 know if there's any kind of pattern there, and
 15 if there is a major occurrence that arises out
 16 of similar facts, we want to be able to look
 17 at those minor occurrences to see if there's a
 18 risk in the system.
 19 EARLE, Q.C.:
 20 Q. Uh-hm, and I think everybody understands and
 21 appreciates the benefit of that. What I'd
 22 like to hear from you now is let us assume
 23 that this incident is in isolation, considered
 24 a minor incident that is dealt with in a
 25 totally controlled fashion, no negative

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1 consequences other than the economic
 2 consequence of having lost a successful
 3 flight. What is the TSB's reporting mechanism
 4 that follows out of such an incident?
 5 MS. TADROS:
 6 A. We would put that into our database as a Class
 7 5 occurrence, and it would remain there and it
 8 would be searchable if there's a future -- if
 9 there's a future occurrence with similar
 10 facts.
 11 EARLE, Q.C.:
 12 Q. So simply put, these minor incidents stop at
 13 the TSB and go no further?
 14 MS. TADROS:
 15 A. Well, they're available and there is a --
 16 there is a plan in place or there's a project
 17 in place in Europe at the moment called ECC-
 18 AIRS, and that involves sharing of data
 19 amongst countries so that you can look not
 20 only to the minor occurrences in Canada, but
 21 there can be a sharing of that information and
 22 somebody can look across the world.
 23 EARLE, Q.C.:
 24 Q. And when you say sharing, I take it you're
 25 talking about sharing that information amongst

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1 similar organizations to the TSB?
 2 MS. TADROS:
 3 A. Yes, and I believe -- I believe, but I'm not
 4 100 percent sure, that regulators may be
 5 involved in that.
 6 EARLE, Q.C.:
 7 Q. But there's no contemplation of a public
 8 disclosure or public access to such
 9 information, is there?
 10 MS. TADROS:
 11 A. You can get that information if you know
 12 exactly what you're looking for, but we're
 13 looking at thousands and thousands of reports
 14 in a week. If you're looking through all the
 15 modes of transportation, we're looking at a
 16 vast amount of data. So we wouldn't, you
 17 know, proactively publish all of that data,
 18 because out of context, it would be
 19 meaningless.
 20 EARLE, Q.C.:
 21 Q. Well, let's put it very specifically. What
 22 would be the capacity, for instance, of the
 23 Joint Chair of an Occupational Health and
 24 Safety Committee on one of these offshore
 25 installations to say I'd like to know, you

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1 know, what kind of incidents are happening
 2 with our means of transportation to and from
 3 work?
 4 MS. TADROS:
 5 A. Well, the reports are being made by the
 6 company, correct?
 7 EARLE, Q.C.:
 8 Q. Uh-hm.
 9 MS. TADROS:
 10 A. And you represent the employees of the
 11 company.
 12 EARLE, Q.C.:
 13 Q. No.
 14 MS. TADROS:
 15 A. No. You represent?
 16 EARLE, Q.C.:
 17 Q. The employees who ride on the company's
 18 helicopter.
 19 MS. TADROS:
 20 A. Oh, I see, okay. I see the distinction. You
 21 know, if you're talking about a narrow band of
 22 data, it may be best to get that from the
 23 people who are supplying the data because then
 24 it will only represent those incidents in the
 25 offshore, or with that particular helicopter

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1 company, or transporting to a particular oil
 2 rig. We have the data for all of aviation
 3 across Canada, and for rail, marine, and
 4 pipeline. So it depends on which is the best
 5 means of you obtaining the exact information
 6 that you want.
 7 EARLE, Q.C.:
 8 Q. But do you have the facility, if you will, for
 9 people who, you know, have a legitimate
 10 interest, like people who are dedicated to
 11 issues of occupational health and safety as it
 12 relate to their workplace, to go to you and
 13 say, well, we use this mode of transport on a
 14 many times daily basis, we would like to know
 15 the incidents that are being reported with
 16 respect to this mode of transport? Do you
 17 have that?
 18 MS. TADROS:
 19 A. We have the facility upon request, yes, but --
 20 so if there's a specific request, then we can
 21 provide that information, but I think you can
 22 appreciate that the data isn't broken down by
 23 region or by undertaking, so we don't collect
 24 it and collate it in that kind of manner. So
 25 on an ongoing basis, if you wanted to receive

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1 it once a month, for instance, that would be
 2 quite a burden on my organization.
 3 EARLE, Q.C.:
 4 Q. Yes.
 5 MS. TADROS:
 6 A. And it may be better to receive that the
 7 people who are making the reports.
 8 EARLE, Q.C.:
 9 Q. Uh-hm. Now you indicated that the draft
 10 report is circulated to interested parties,
 11 and as a lawyer, I know that that is a
 12 weighted term, has a real legal meaning.
 13 MS. TADROS:
 14 A. We don't call them parties. We call them
 15 designated reviewers.
 16 EARLE, Q.C.:
 17 Q. Designated reviewers, but I believe you did
 18 say in your evidence that designated reviewers
 19 are representatives of interested parties.
 20 MS. TADROS:
 21 A. I don't believe I said parties, but --
 22 EARLE, Q.C.:
 23 Q. Nevertheless, I think we understand very
 24 easily that if you're going to say that the
 25 manufacturer of a particular type of aircraft

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1 has a problem in the design of that aircraft,
 2 that that is a body that has a very real
 3 interest in both the colloquial and the legal
 4 sense in the proceeding, and as I understand
 5 your evidence, what you tell us that a body
 6 like this would have a designated reviewer who
 7 would receive the draft report and be able to
 8 comment, is that correct?
 9 MS. TADROS:
 10 A. That's correct.
 11 EARLE, Q.C.:
 12 Q. Okay. Do you have within your system any
 13 capacity or means to, if you will, have
 14 someone review or comment on an issue from the
 15 perspective of the transportation user?
 16 MS. TADROS:
 17 A. We go -- that's a touchy issue, and we go back
 18 to the legislation which defines a person with
 19 a direct interest, and if -- if the test is
 20 met, and this is a determination that's made
 21 by the Board, if the test is met, the person
 22 or the body becomes a designated reviewer. If
 23 the test is not met, they will not. So it
 24 depends on the facts. You'd have to look at
 25 each one on its facts. Very rarely would a

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1 travelling member of the public be a
 2 designated reviewer. If they were on the
 3 flight, they would be interviewed, so they
 4 would be a witness, but they -- they probably
 5 would not meet the test of a designated
 6 reviewer.
 7 EARLE, Q.C.:
 8 Q. You can appreciate, though, that in this
 9 particular circumstance we have a frequency of
 10 use of a particular design of aircraft and a
 11 particular methodology?
 12 MS. TADROS:
 13 A. Yes, and that is why individuals may be
 14 interviewed to learn what they know about
 15 those things.
 16 EARLE, Q.C.:
 17 Q. But even with such a high frequency of use by
 18 a defined group of people, the people who work
 19 on these offshore installations, or the drill
 20 platforms, you would not have anyone, if you
 21 will, a passenger advocate, designated to
 22 review and give input to your draft report?
 23 MS. TADROS:
 24 A. You're asking me a hypothetical question and
 25 it's very difficult to answer without the

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1 context. If you're talking to me about the
 2 ongoing investigation of Cougar 491, then
 3 those determinations have not been made. They
 4 will be made by the Board when the draft
 5 report comes forward from the Director of
 6 Investigations here.

7 EARLE, Q.C.:

8 Q. Well, perhaps I've planted a thought in the
 9 mind of the Board. I'm interested in what you
 10 said about your investigation, and you talked
 11 about safety defences, and the example I
 12 believe you gave was a warning light on the
 13 panel for an operation, and I'd like to have
 14 some sense of how far this notion of defences
 15 go. You've certainly, unfortunately, had to
 16 investigate a number of marine incidents in
 17 our territory over the past few years. So if
 18 I could use that as an area to get a sense of
 19 where you go. If you had a marine incident, a
 20 vessel going down, and, of course, vessels are
 21 required to be equipped with life rafts,
 22 locator beacons, and a variety of safety
 23 equipment, would that be considered a defence
 24 which you would investigate if, for instance,
 25 one of those malfunctioned?

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1 MS. TADROS:
 2 A. Okay. The defences are either physical or
 3 administrative, so in the case of a fishing
 4 vessel, we wouldn't look broadly at the whole
 5 vessel when we're looking at a defence. We
 6 want to look at what is the risk and what is
 7 the unsafe condition and then what are the
 8 defences to address that. So it's a much more
 9 methodical process issue by issue, but
 10 basically the thinking is that for robust
 11 safety systems, there should be defences in
 12 depth. So we're looking to see that there is
 13 more than one defence and how did those
 14 defences play out, how did they work. Did
 15 they work? Did they not work, and what
 16 happened if they didn't work? So I'm having a
 17 difficulty answering the question in context.
 18 Perhaps if there's a particular issue like -

19 EARLE, Q.C.:

20 Q. Well, that's a -

21 MS. TADROS:
 22 A. - the people getting rescued, for instance.
 23 You want to look at what's available to them
 24 to communicate with other people so they can
 25 be rescued, and that's a defence.

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1 EARLE, Q.C.:

2 Q. That's a defence. So an EPERB, an emergency
 3 locator beacon -

4 MS. TADROS:
 5 A. Is a defence.

6 EARLE, Q.C.:

7 Q. - and if it was one that was supposed to
 8 automatically activate and it didn't
 9 automatically activate, that would be a matter
 10 for your concern?

11 MS. TADROS:
 12 A. Absolutely, and we would want to know two
 13 primary things. Why didn't it activate, and
 14 is this a problem in the system or was it just
 15 on that vessel on that day?

16 EARLE, Q.C.:

17 Q. And I presume you might also want to know and
 18 what alternatives were there to back up that
 19 unit in the case of failure?

20 MS. TADROS:
 21 A. Were there other defences that could have been
 22 of assistance, yes.

23 EARLE, Q.C.:

24 Q. Now we have a system of support, if you will,
 25 rescue support that operates in the--we'll use

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1 the marine environment. You have everything
 2 from military based search and rescue. You
 3 have Coast Guard. You have Coast Guard
 4 Auxiliary made up of volunteers and we have a
 5 radio communication system, fairly extensive
 6 system of, if you will, responders to
 7 accidents. Do you consider those responders
 8 to be part of the defences?

9 MS. TADROS:
 10 A. They may well be. The first question that has
 11 to be answered is the scope of the
 12 investigation and in many of our
 13 investigations, we will look at search and
 14 rescue and whether it operated effectively.
 15 It depends on the facts of the accident. So
 16 in many, many of our investigations, we have
 17 looked at that, at that issue.

18 EARLE, Q.C.:

19 Q. So you -

20 MS. TADROS:
 21 A. But we may not necessarily is what I'm telling
 22 you. It depends on the facts of the accident.

23 EARLE, Q.C.:

24 Q. But it is not ipso facto outside your purview?

25 MS. TADROS:

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1 A. No, because the accident is--the accident, as
 2 a concept, is not a very narrow thing. So
 3 we're looking at response to the accident, if
 4 that comes into play, if that's an issue.
 5 We're looking at, you know, things that might
 6 have saved the lives of the people who were in
 7 the accident. So we broadly scope the
 8 investigations and that's a determination
 9 that's made by the investigator in charge and
 10 the director of investigations, as to which
 11 issues are going to be examined in depth and
 12 the way that we come to that determination is
 13 through the ISIM methodology.
 14 EARLE, Q.C.:

15 Q. And you say the investigators make that
 16 decision, and we know that search and rescue
 17 provided by the military is out of bounds, if
 18 you will, for this Inquiry. However, there
 19 are some people, at least, who believe that
 20 search and rescue provided by other than the
 21 military will be clearly within the bounds of
 22 this Inquiry. How would we know, other than
 23 by receiving your final report, that
 24 Transportation Safety Board will be going in
 25 that area?

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1 MS. TADROS:
 2 A. Well, the other way that you--you normally
 3 would find out in the final report, unless you
 4 were somebody with a direct interest in that
 5 issue and then you'd be invited to comment on
 6 it. The other way you would know is if we put
 7 out an interim safety communication on an
 8 issue like that.
 9 EARLE, Q.C.:

10 Q. Ms. Tadros, you spoke of how this Inquiry
 11 could influence helicopter safety and you
 12 talked about contractual means and conditions
 13 of license and the like. I was interested, it
 14 seemed to me that you were urging an approach
 15 that says don't just stop at the regulatory
 16 standard. Seek to go beyond meeting the
 17 regulatory standard, that that's the approach
 18 that safety management should have.
 19 MS. TADROS:
 20 A. Well, I would always encourage companies or
 21 segments of industries or industries as a
 22 whole to go beyond the regulatory standards.
 23 EARLE, Q.C.:

24 Q. Isn't it fair to say that one of the big
 25 results of the efforts of the Transportation

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1 Safety Board has been to cause regulators to
 2 look at their standards and increase their
 3 standards?
 4 MS. TADROS:
 5 A. Yes. I mean, just to draw a distinction, the
 6 investigations that we do are not regulatory
 7 audits, so we are not looking primarily to see
 8 if the operator met the regulations. We're
 9 looking beyond that to all the safety issues.
 10 So if the regulation itself is deficient, then
 11 that's something that we will look at and we
 12 will point out, if you take my distinction.
 13 EARLE, Q.C.:

14 Q. Yes, and you make recommendations -
 15 MS. TADROS:
 16 A. Yes.
 17 EARLE, Q.C.:

18 Q. - that have, from time to time, led to a new
 19 regulatory scheme?
 20 MS. TADROS:
 21 A. Yes.
 22 EARLE, Q.C.:

23 Q. Thanks very much, Ms. Tadros.
 24 MS. TADROS:
 25 A. You're very welcome.

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1 COMMISSIONER:
 2 Q. Thank you. Now, counsel for the families, Mr.
 3 Martin.
 4 MS. WENDY TADROS, EXAMINATION BY MR. JAMIE MARTIN
 5 MR. MARTIN:
 6 Q. Thank you, Mr. Commissioner. I guess it's now
 7 good afternoon, Ms. Tadros.
 8 MS. TADROS:
 9 A. Good afternoon.
 10 MR. MARTIN:
 11 Q. I'm Jamie Martin. I represent several of the
 12 families of the Flight--of the passengers on
 13 the Cougar helicopter on March the 12th '09.
 14 I just have a couple of questions, and the
 15 first one, I just want to follow up on Mr.
 16 Earle's questions on the receipt of that draft
 17 report, the designation process that you use
 18 for that purpose. It was my understanding of
 19 your evidence that individuals with a direct
 20 interest would be provided with that draft
 21 report, and I think you included, among
 22 others, the operators, any corporate entities
 23 that would have a direct interest. Is that
 24 correct?
 25 MS. TADROS:

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1 A. I'm just trying to provide you with examples
 2 from past investigations. In terms of this
 3 investigation, that determination will have to
 4 be made when we're further down the road.
 5 MR. MARTIN:
 6 Q. I realize, from your response to Mr. Earle's
 7 question, that there's been no decision taken
 8 on the report because the report is not done
 9 yet.
 10 MS. TADROS:
 11 A. That's correct.
 12 MR. MARTIN:
 13 Q. But you did provide a number of examples of
 14 people who would likely get receipt of the
 15 draft report and I think you included the
 16 operators. You also included the pilots and
 17 the co-pilot or their families. Is that
 18 correct?
 19 MS. TADROS:
 20 A. That's correct. That is the normal practice
 21 or that's what I can tell you from previous
 22 investigations that the flight crew are
 23 normally designated reviewers or their next of
 24 kin.
 25 MR. MARTIN:

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1 Q. Now what about the members of a deceased
 2 family?
 3 MS. TADROS:
 4 A. They are not normally designated reviewers
 5 because it is not just people with an
 6 interest, but people with a direct interest,
 7 which I think you can appreciate that's a
 8 legal distinction. But unless they were
 9 involved in the operation of the aircraft,
 10 then there isn't normally a direct interest.
 11 But again, I cannot say for this particular
 12 investigation.
 13 MR. MARTIN:
 14 Q. So there are exceptions or there have been
 15 exceptions used in the past by the
 16 Transportation Safety Board to allow that to
 17 happen? Would that be a fair comment?
 18 MS. TADROS:
 19 A. There can be exceptions, if it is clearly
 20 demonstrated that the individual meets the
 21 test.
 22 MR. MARTIN:
 23 Q. Okay, can you bring the test up? I believe
 24 you referred to the test as a statutory test,
 25 something that's in the statute, correct me if

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1 I'm wrong, and I don't think it -
 2 MS. TADROS:
 3 A. There's two things--oh, sorry.
 4 MR. MARTIN:
 5 Q. I don't think we discussed what the test is.
 6 Can you point us to the test?
 7 MS. TADROS:
 8 A. There's -
 9 MR. MARTIN:
 10 Q. In the regulations or the Act itself.
 11 MS. TADROS:
 12 A. There's a test, but there's also a policy
 13 which I don't have with me here today. I
 14 could provide it to you, if you wish.
 15 MR. MARTIN:
 16 Q. I think it would be helpful, if you could?
 17 MS. TADROS:
 18 A. Okay. John, can we undertake to provide the
 19 policy on designated reviewers to Mr. Martin,
 20 please?
 21 MR. COTTREAU:
 22 A. Absolutely.
 23 MS. TADROS:
 24 A. The reference in the Act, I believe, is
 25 Section 24. It's Section 24.2, subsection

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1 24.2, and if you look about the middle of that
 2 paragraph, it's basically the wording that -
 3 MR. MARTIN:
 4 Q. Can we bring it down a little bit further,
 5 because I'm--24.2, is it?
 6 MS. TADROS:
 7 A. Okay.
 8 MR. MARTIN:
 9 Q. Okay, sorry.
 10 MS. TADROS:
 11 A. So the draft report, on its findings and any
 12 safety deficiencies that it has identified to
 13 each Minister and any other person who, in the
 14 opinion of the Board, has a direct interest in
 15 the findings of the Board. So that is the
 16 wording in the Act. The policy further
 17 defines what it means to have a direct
 18 interest.
 19 MR. MARTIN:
 20 Q. Okay, and I know you don't have the policy
 21 here, but -
 22 MS. TADROS:
 23 A. I can give you the basic parameters.
 24 MR. MARTIN:
 25 Q. If you could, please?

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1 MS. TADROS:
 2 A. If you don't hold me to the exact wording.
 3 MR. MARTIN:
 4 Q. No, no, that's fine, I won't.
 5 MS. TADROS:
 6 A. It's a person who may see their behaviour or
 7 product commented on in the report or who may
 8 contribute to the scientific fullness of the
 9 report, the accuracy of the report.
 10 MR. MARTIN:
 11 Q. But is it possible for the members of the
 12 deceased families to fall within that category
 13 as someone having a direct interest in the
 14 proceedings?
 15 MS. TADROS:
 16 A. You would have to make a very clear argument
 17 and demonstrate very clearly why that was the
 18 case.
 19 MR. MARTIN:
 20 Q. And who would have to make that argument, the
 21 families themselves or their legal
 22 representative?
 23 MS. TADROS:
 24 A. Well, the legal representative represents the
 25 families so stands instead of the families, I

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1 would -
 2 MR. MARTIN:
 3 Q. But at what stage do you make those
 4 representations? Because at some point in
 5 time, you're going to get to the stage in your
 6 proceedings where you're going to have to
 7 issue a draft report, and then a decision is
 8 going to have to be made, well who do we
 9 circulate that report to. So how will we
 10 know, as their legal representative, or how
 11 will the families know that there is a
 12 decision about to be taken about the release
 13 of a draft report? Will there be timely
 14 notification of that?
 15 MS. TADROS:
 16 A. I would say that, you know, if you make it
 17 known that you're interested in making
 18 representations, then we will be mindful of
 19 that, or there's no particular time limit.
 20 You can make those representations at any time
 21 from this day forward.
 22 MR. MARTIN:
 23 Q. Okay, and they're made directly to whom?
 24 MS. TADROS:
 25 A. They're made directly to the Board, so you can

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1 write anybody at the Board or you can make
 2 them to the investigator in charge.
 3 MR. MARTIN:
 4 Q. Okay. Now when that process is undertaken and
 5 the draft report is circulated to the various
 6 parties who meet the definition as you've
 7 outlined in the Act, do the comments of each
 8 party then get distributed to the other
 9 parties who have made comments on the draft or
 10 do you restrict them or do you just sent them
 11 back the report with their own comments
 12 reflected? Just explain that process. In
 13 other words, what I'm getting at is if I have
 14 a direct interest and I'm allowed to make
 15 comments on that report, do I get to know what
 16 the other parties -
 17 MS. TADROS:
 18 A. No.
 19 MR. MARTIN:
 20 Q. I don't?
 21 MS. TADROS:
 22 A. Because the comments from the designated
 23 reviewers, not the parties, but the designated
 24 reviewers, are confidential. The list of who
 25 are designated reviewers is also confidential,

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1 and the reason for this is that we want
 2 anybody with a direct interest, whether they
 3 are the head of a major corporation or the
 4 fellow who works on the line for \$12 an hour,
 5 to be able to freely comment to the Board and
 6 to tell us what they know and what their
 7 opinion is without any fear of reprisal. We
 8 want them to speak openly and honestly to the
 9 Board and to voice their opinions, and there's
 10 no back and forth between the designated
 11 reviewers. The back and forth comes when the
 12 Board analyses each and every comment to
 13 determine whether it's valid or not.
 14 MR. MARTIN:
 15 Q. Okay. I'll move on to my second line of
 16 questioning. In response--and I appreciate
 17 the opportunity to be getting that policy and
 18 certainly upon review of that policy and the
 19 legislative requirements, we'll discuss that
 20 with our clients. The second line of
 21 questioning, you were asked by Ms. Fagan as to
 22 what constitutes the black box. I mean, it's
 23 a very common term that we hear about post-
 24 accident and you indicated that the first
 25 component was a flight data recorder and the

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1 second component was a cockpit voice recorder.
 2 Is that correct?
 3 MS. TADROS:
 4 A. That's correct.
 5 MR. MARTIN:
 6 Q. Okay. Now you went on to say that the cockpit
 7 voice recorder is privileged information.
 8 It's treated the same as a witness statement.
 9 Is that correct?
 10 MS. TADROS:
 11 A. It's privileged under the Act.
 12 MR. MARTIN:
 13 Q. Privileged under the Act, okay. So it's a
 14 statutory privilege. It's not a common law
 15 privilege. And I know--I'm not trying to get
 16 legalistic here, but that's where the
 17 privilege arises from, it's a statutory
 18 privilege?
 19 MS. TADROS:
 20 A. Correct.
 21 MR. MARTIN:
 22 Q. And I don't believe that you identified where
 23 in the Act that privilege would exist. Can
 24 you point us to it?
 25 MS. TADROS:

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1 A. Section 28.
 2 MR. MARTIN:
 3 Q. Section 28, and so it's a fairly detailed
 4 definition. Do you want to just paraphrase
 5 where the authority lies for the privilege?
 6 So what is that section saying?
 7 MS. TADROS:
 8 A. Well, in terms of--if we just look at
 9 aircraft, it's recording of voice
 10 communications originating from or received on
 11 or in the flight deck of an aircraft.
 12 MR. MARTIN:
 13 Q. Okay, and are there any exceptions to the
 14 statutory privilege?
 15 MS. TADROS:
 16 A. Yes. A lot of these provisions, I think you
 17 can appreciate that in a democratic society,
 18 there are lots and lots of interests and so
 19 when these provisions are crafted, they're
 20 rather like those Russian dolls where there's
 21 a provision and then there's another one in
 22 the middle and another one and another one,
 23 and if you look down, there are provisions
 24 where Courts can--if you can just scroll down
 25 a little bit, you'll find that.

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1 MR. MARTIN:
 2 Q. Courts can--or someone can subpoena the
 3 records? Would that be a fair exception?
 4 MS. TADROS:
 5 A. Well, let's put it this way. They can try.
 6 MR. MARTIN:
 7 Q. They can try, okay. So there is recourse for
 8 parties if they really want to get at that
 9 information?
 10 MS. TADROS:
 11 A. There's recourse--the Courts may decide that
 12 in the interest of justice that it is either
 13 to be released on a very limited basis or on a
 14 general basis, but this is one of the things
 15 that we take great pains to protect and
 16 respect, and so if there are Court
 17 proceedings, we've been very successful in
 18 arguing that the privilege afforded to the CVR
 19 should be maintained.
 20 MR. MARTIN:
 21 Q. Okay, and that privilege only exists for the
 22 CVR? It doesn't exist for the flight data
 23 recorder?
 24 MS. TADROS:
 25 A. No, there's no--that's not personal

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1 information in any way. It's not information
 2 associated with a person's voice and it's
 3 data, you know. The aircraft was travelling
 4 at such and such a speed. So there's no need
 5 to have privilege afforded to that data.
 6 MR. MARTIN:
 7 Q. Okay, the CVR, the cockpit voice recorder is
 8 considered personal information?
 9 MS. TADROS:
 10 A. Yes, and -
 11 MR. MARTIN:
 12 Q. That's how it falls within the privilege? Is
 13 that a fair comment?
 14 MS. TADROS:
 15 A. Yes, and I mean, the cockpit is a pilot's
 16 place of work, and so we have to be very
 17 careful when you're routinely recording
 18 somebody's place of work that that be
 19 respected.
 20 MR. MARTIN:
 21 Q. Okay. Those are my questions, Ms. Tadros.
 22 Thank you very much.
 23 MS. TADROS:
 24 A. Okay.
 25 COMMISSIONER:

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1 Q. Okay, thank you, Mr. Martin. Counsel for the
 2 estates of the pilots, Mr. O'Brien?
 3 O'BRIEN, Q.C.:
 4 Q. I don't have any questions, Commissioner.
 5 COMMISSIONER:
 6 Q. No questions, okay, thank you. Anything from
 7 Inquiry counsel to close out the matter then?
 8 MS. WENDY TADROS, RE-EXAMINATION BY MS. ANNE FAGAN
 9 MS. FAGAN:
 10 Q. I just have one area which I'd like Mrs.
 11 Tadros to just clarify, and that is the issue
 12 between the TSB's role and the regulator's
 13 role, just to ensure that it's clear as to
 14 sort of the enforcement powers or the ability
 15 of the TSB to regulate these activities or the
 16 lack of the power to act as the regulator. If
 17 you could just cover that one point, please?
 18 MS. TADROS:
 19 A. Well, the TSB is not a regulator. We're
 20 absolutely not a regulator and that was done
 21 purposefully in Canada because in the older
 22 days, more than 20 years ago, accident
 23 investigation was done by the regulators and
 24 that was seen as a conflict of interest, so a
 25 decision was made, a conscious decision, to

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1 separate out the accident investigation
 2 capability from the regulator's tasks and the
 3 regulator in Canada is Transport Canada. In
 4 the United States, is it the FAA.
 5 MS. FAGAN:
 6 Q. So since the TSB cannot attribute blame, the
 7 TSB's mechanism, once it conducts its
 8 investigation, what is the TSB's mechanism to
 9 see that their recommendations are adopted or
 10 carried out?
 11 MS. TADROS:
 12 A. Well, we have several ways that we communicate
 13 safety deficiencies and recommendations are at
 14 the higher end or they are the most serious
 15 issues. We may communicate through a safety
 16 advisory, safety information letter, and we do
 17 these things all along the way. So the
 18 regulator is aware of what the issues are as
 19 the investigation is proceeding, and best case
 20 scenario is that action is taken before we get
 21 to the stage of making a recommendation. But
 22 if we do make a recommendation, then if it
 23 goes to a minister in the government, they
 24 have 90 days in which to tell us and tell the
 25 public what they are going to do in response

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1 to that recommendation. Then we rate that
 2 response and we post the rating on our website
 3 and we follow up on a periodic basis and
 4 basically, the role in that respect is one of
 5 persuasion and we believe if you have strong
 6 science and you have a logical argument that
 7 you put forth that the changes that we
 8 recommend should be made.
 9 MS. FAGAN:
 10 Q. So as this Inquiry is looking at the safety of
 11 workers, we would appreciate and take you up
 12 on your offer to provide the recommendations
 13 that whatever they are there, whatever
 14 recommendations that the TSB has made in the
 15 area of helicopter transportation, for
 16 consideration. Because some of these
 17 recommendations may be in the regulations, but
 18 some of them may not be for the regulator, may
 19 not be in the regulator's exact area, or they
 20 may not actually be regulations yet. So as
 21 you've said initially, this Inquiry can make
 22 recommendations to the C-NLOPB through a
 23 contract or through the authorization process,
 24 we would like to consider those
 25 recommendations. So I'd ask that you follow

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1 up and provide those recommendations to us for
 2 consideration.
 3 MS. TADROS:
 4 A. Okay. I'd be pleased to do that. We can
 5 certainly talk about the scope of what you
 6 would like to receive, because there are
 7 recommendations that were made in the context
 8 of helicopter investigations. There are
 9 recommendations that were made in other
 10 contexts that may be transferable. So we'd be
 11 pleased to provide you with whatever you need.
 12 MS. FAGAN:
 13 Q. Okay, thank you, appreciate your evidence.
 14 MS. TADROS:
 15 A. Thank you.
 16 COMMISSIONER:
 17 Q. Okay then, thank you. Well then, in closing,
 18 Mrs. Tadros, is there any sort of general
 19 comment you might wish to make or further
 20 comment?
 21 MS. TADROS:
 22 A. I would just follow up on the last comment
 23 that I made that if--as your Inquiry moves
 24 forward, if there's any further information
 25 that comes to your attention and you need more

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1 information from the TSB that we'd be pleased
2 to provide you with whatever we can, and I
3 wish you well.

4 COMMISSIONER:

5 Q. Okay, thank you very much. All right then, if
6 there's nothing further then, we'll adjourn.

7 ROIL, Q.C.:

8 Q. Until Monday.

9 COMMISSIONER:

10 Q. Oh yes. We had set aside two days. Obviously
11 it's not been used, so we'll meet again at
12 9:30 on Monday morning coming. Okay, thank
13 you.

14 ADJOURNED TO NOVEMBER 2, 2009 AT 9:30 A.M.

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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 28th day of October, 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 28th day of October, 2009

11 Cindy Sooley

12 Discoveries Unlimited Inc.

13 Judy Moss

14 Discoveries Unlimited Inc.

<p>-\$-</p> <p>\$12 [1] 104:4</p> <p>-?-</p> <p>'09 [1] 96:13</p> <p>-1-</p> <p>1 [2] 4:5 29:12 10 [1] 29:12 100 [1] 83:4 10:45 [1] 59:10 11 [1] 23:13 111 [3] 6:14 48:16 52:13 12th [1] 96:13 13 [2] 8:14 30:3 1990 [1] 5:19</p> <p>-2-</p> <p>2 [8] 32:3,5,8 33:10,12 35:22 39:1 113:14 20 [3] 3:22 72:15 109:22 2009 [4] 1:1 113:14 114:4 114:10 2121 [2] 71:14,14 213 [1] 114:5 235 [5] 9:12 50:14,15,20 51:9 24 [1] 99:25 24.2 [3] 99:25 100:1,5 28 [3] 1:1 106:1,3 28th [2] 114:4,10</p> <p>-3-</p> <p>3 [6] 32:3,6 34:23 35:1,19 35:21 30 [4] 56:11 66:10,14,21 300 [1] 11:18 31 [1] 114:5 36 [1] 23:23</p> <p>-4-</p> <p>4 [3] 8:15 26:17 72:5 4,000 [2] 12:3 21:16 491 [9] 3:4 16:3 17:11 25:11 28:12 52:14 53:3 57:1 89:2</p> <p>-5-</p> <p>5 [1] 82:7 50,000 [1] 11:23 55 [1] 11:19</p> <p>-6-</p> <p>6 [3] 15:1 38:7,11 60 [3] 66:10,14,21</p> <p>-7-</p>	<p>7 [1] 22:4 70 [1] 12:1</p> <p>-8-</p> <p>8 [1] 22:12 80,000 [1] 11:21</p> <p>-9-</p> <p>9 [1] 22:12 90 [1] 110:24 9:30 [2] 113:12,14</p> <p>-A-</p> <p>A.M [1] 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