

OFFSHORE HELICOPTER SAFETY INQUIRY

October 21, 2009

Tara Place, Suite 213, 31 Peet Street

St. John's, NL

October 21, 2009

PRESENT:

**John F. Roil, Q.C./
Anne Fagan.....Inquiry Counsel**

**Amy Crosbie/ Canada-Newfoundland and Labrador Offshore
John Andrews..... Petroleum Board (C-NLOPB)**

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

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

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

Jonathan Tarlton/Mark FreemanDepartment of Transport Canada

Norman J. Whalen, Q.C.....Cougar Helicopters Inc.

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

Jamie Martin.....Families of Deceased Passengers

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

**Raman BalakrishnanCommunications, Energy and Paperworkers Union
..... Local 2121**

**Karen Hollett Offshore Safety & Survival Centre,
..... Marine Institute, MUN**

Paul Barnes Canadian Association of Petroleum Producers (CAPP)

Page 1

1 October 21, 2009
 2 COMMISSIONER:
 3 Q. Good morning, ladies and gentlemen. Are you
 4 ready, Mr. Roil?
 5 ROIL, Q.C.:
 6 Q. Yes, thank you, Commissioner. The evidence
 7 that we went through yesterday ended off at
 8 the point--I spoke to Mr. Pike early this
 9 morning, and he indicated he did want to
 10 clarify one of the things he said yesterday
 11 so, Mr. Pike, what issue was it that you
 12 wanted to give us further clarification on?
 13 MR. PIKE:
 14 Q. I don't feel I was very clear yesterday on the
 15 first response helicopter, and I'd like to
 16 sort of explain a little bit more clearly as
 17 to what our requirements are in that regard,
 18 and I'd like to refer you to the guidelines
 19 respecting drilling programs.
 20 ROIL, Q.C.:
 21 Q. Okay, the guidelines, is that something we can
 22 bring up on the video screens for those
 23 present?
 24 MR. PIKE:
 25 Q. I believe we can.

Page 2

1 MS. WILLIAMS:
 2 Q. Do you have the exhibit number?
 3 ROIL, Q.C.:
 4 Q. 45 let's try that.
 5 MR. PIKE:
 6 A. Yes, that would be the one.
 7 ROIL, Q.C.:
 8 Q. Okay, do you want to control the screen at
 9 this point, Mr. Pike?
 10 MR. PIKE:
 11 Q. Yes, and first to Appendix C which deals with
 12 -
 13 ROIL, Q.C.:
 14 Q. Okay, I believe we have the microphone. It's
 15 not very close to you. I don't know if you're
 16 able to move a little bit or move the
 17 microphone just so that we can make sure that
 18 you're being picked up clearly.
 19 MR. PIKE:
 20 Q. Okay.
 21 ROIL, Q.C.:
 22 Q. Speak up a little louder too so I can hear you
 23 from here.
 24 MR. PIKE:
 25 Q. Appendix C deals with contingency plans, and I

Page 3

1 refer you partway down here to the "Standby
 2 Helicopter Requirements."
 3 ROIL, Q.C.:
 4 Q. Yes.
 5 MR. PIKE:
 6 Q. "Operators on the Grand Banks are expected to
 7 maintain a standby helicopter dedicated to
 8 search and rescue on a 24-hour-a-day basis.
 9 This helicopter should be equipped with a
 10 rescue winch and survival equipment suitable
 11 for deployment from the helicopter. Personnel
 12 trained in the operation of the winch and
 13 deployment of the survival equipment should
 14 also be available. Provision should be made
 15 for helicopter training time sufficient to
 16 ensure that helicopter and rescue crews can
 17 develop the necessary coordination to operate
 18 effectively."
 19 ROIL, Q.C.:
 20 Q. Okay, but my first question--as you read that,
 21 the word "should" and "should" appears, what
 22 is the expectation? I realize these are
 23 guidelines. What is the expectation of the C-
 24 NLOPB?
 25 MR. PIKE:

Page 4

1 Q. That this would be in place before we issue an
 2 authorization.
 3 ROIL, Q.C.:
 4 Q. Okay.
 5 MR. PIKE:
 6 Q. And I refer you further to Appendix E, which
 7 is "Guidance and Specific Regulatory
 8 Requirements," and we go down further to
 9 "Helicopter Operations," and I think, as I
 10 mentioned yesterday, "All helicopters must be
 11 certified by Transport Canada." "All pilots
 12 must be licensed. Helicopter crews, including
 13 first response technicians, should have
 14 experience with the aircraft being used, and
 15 experience with offshore operations in similar
 16 environments. Adequate flight time must be
 17 provided for first response practice and
 18 drills." "The aircraft should be of the
 19 multi-engine design and should be capable of
 20 landing on water in at least moderate seas,"
 21 and we talked a little bit about the flight
 22 following, and then "the aircraft must be
 23 capable of communication with the shore base,
 24 the drilling installation, supply boats, and
 25 lifeboats," and then it goes on with the

Page 5

1 further requirements that we had been
 2 discussing yesterday on helicopters, so again
 3 pointing out what the first response piece is,
 4 and I think this is a little clearer than my
 5 explanation yesterday.
 6 ROIL, Q.C.:
 7 Q. So in the event of an incident involving an
 8 offshore helicopter going to or from an
 9 offshore installation, where is the first
 10 response to an incident expected to come from?
 11 MR. PIKE:
 12 Q. It would be from the helicopter provider.
 13 ROIL, Q.C.:
 14 Q. From the contracted provider.
 15 MR. PIKE:
 16 Q. From the contracted provider. It would be all
 17 part of the risk assessments that we've been
 18 talking about as you assess the risks.
 19 Greater survival can be achieved with quicker
 20 response, and in evaluating these things some
 21 of the quicker response can be achieved from
 22 the first response provider, so again it
 23 increases the chances of survival for those
 24 persons that would be involved in an incident.
 25 ROIL, Q.C.:

Page 6

1 Q. Okay, and what is the first response location
 2 from which the contractor is required to have
 3 helicopter rescue operations?
 4 MR. PIKE:
 5 Q. From the current operations we have, it would
 6 be St. John's.
 7 ROIL, Q.C.:
 8 Q. Okay, are you satisfied that the issue is now
 9 clear?
 10 MR. PIKE:
 11 Q. Yes, I think so.
 12 ROIL, Q.C.:
 13 Q. Okay. In your evidence yesterday, we ended
 14 up, I think, with the slide that was dealing
 15 with the assessment process, and we were about
 16 to move into the reporting requirements, and I
 17 think that you had told us that the assessment
 18 is prior to an authorization being issued, and
 19 now please explain to us what step in the
 20 requirements of the C-NLOPB are you taking us?
 21 MR. PIKE:
 22 Q. See if we can get this slide up--okay, we
 23 yesterday sort of finished off where we would
 24 had issued the authorization. We would have
 25 completed the safety assessment process. Now

Page 7

1 the monitoring starts, and this is done
 2 through various means. There are daily
 3 reports, which are filed by the operator and,
 4 as the name suggests, on a daily basis. They
 5 provide a summary of the daily activities and
 6 would highlight any abnormal occurrences.
 7 They would also include information on
 8 logistics, and by logistics we would refer to
 9 the support functions for the offshore
 10 operation, and they would include the transfer
 11 of personnel, so it would include information
 12 on what helicopter flights would have arrived
 13 during that day, and also the vessel activity,
 14 the supply vessels that are used to bring
 15 provisions and materials to the offshore. We
 16 also receive and require minutes of the Joint
 17 Occupational Health and Safety Committee.
 18 ROIL, Q.C.:
 19 Q. Oh, sorry, before you go on there, to what use
 20 are the daily reports, so what, if anything,
 21 does the C-NLOPB do with them as you receive
 22 them? You receive them on a daily basis first
 23 at the office?
 24 MR. PIKE:
 25 Q. We receive them on a daily basis.

Page 8

1 ROIL, Q.C.:
 2 Q. Yes.
 3 MR. PIKE:
 4 Q. And we would file them. These are
 5 requirements under the current regulations, to
 6 file these daily reports. In the case of a
 7 drilling operation there is an international
 8 standard. They refer to it as a tower sheet,
 9 which is filled out each day, and it details
 10 what is happening on the drilling of the rig.
 11 In cases where we have seen some abnormal
 12 conditions, we would review those tower sheets
 13 over the last number of days to see what was
 14 progressing and what directions they were
 15 heading, so it's used as a monitoring tool to
 16 see what's happening on the rig offshore. We
 17 may not look at them on a daily basis, but
 18 when we're notified of an abnormality we would
 19 take a closer look at those data reports.
 20 ROIL, Q.C.:
 21 Q. Okay.
 22 MR. PIKE:
 23 Q. We also receive and require the minutes of the
 24 Joint Occupational Health and Safety
 25 Committees to be provided. This provides us

Page 9

1 with an insight of what is happening on the
 2 installation and how it is being dealt with,
 3 and flags any potential problems. We'll talk
 4 a little bit more about those in a moment, and
 5 I think we've talked a little bit about those
 6 yesterday.
 7 ROIL, Q.C.:
 8 Q. Yes, we will get back to it, sure.
 9 MR. PIKE:
 10 Q. There's also a monthly statistic report filed
 11 with our office and reviewed by our staff, and
 12 we'll talk a little bit more about that. All
 13 incidents are required to be reported within
 14 24 hours. More significant incidents are
 15 required to be called in to our duty officer
 16 of the day, and that's a 24-hour, 7-day-a-
 17 week, 52-weeks-of-the-year phone that you
 18 would phone in to, and a follow-up report is
 19 required within 14 days of the incident, and
 20 we like to hold the operators to those 14
 21 days, but there are occasional circumstances
 22 where it may take longer to investigate an
 23 incident, and we'll talk a little bit more
 24 about those.
 25 ROIL, Q.C.:

Page 10

1 Q. Okay, so these are the reporting requirements
 2 in a synopsis form.
 3 MR. PIKE:
 4 Q. In a synopsis form, yes.
 5 ROIL, Q.C.:
 6 Q. Okay.
 7 MR. PIKE:
 8 Q. We talked a little bit yesterday about the
 9 Joint Occupational Health and Safety
 10 Committees. "Joint Occupational Health and
 11 Safety Committees play an important role in
 12 the Canadian health and safety law. The
 13 establishment of such Joint Occupational and
 14 Safety Committees is one of the important
 15 elements of the internal responsibility
 16 system, which encourages input from both
 17 workers and management in addressing workplace
 18 health and safety issues. These entities are
 19 a legal requirement and are intended to
 20 involve workers and management in reducing
 21 workplace accidents and improving workplace
 22 health and safety. The committees on offshore
 23 installations operate as workplace committees,
 24 and we talked a little bit about that
 25 yesterday, in contrast to the traditional

Page 11

1 onshore committee which would be employer
 2 based.
 3 ROIL, Q.C.:
 4 Q. And that is because?
 5 MR. PIKE:
 6 Q. An installation such as the Hibernia platform
 7 could have as many as 30 different employers,
 8 some--maybe a third of those with only one
 9 employee, so it would be less effective if 30
 10 different employers either had a committee of
 11 their own or a safety representative.
 12 ROIL, Q.C.:
 13 Q. I think perhaps we might want to clarify the
 14 number of employers because we don't have any
 15 evidence yet on how the operators operate, but
 16 perhaps just clarify what kind of contractors
 17 are out there?
 18 MR. PIKE:
 19 Q. Well, let's take the Hibernia installation for
 20 an example.
 21 ROIL, Q.C.:
 22 Q. Yes.
 23 MR. PIKE:
 24 Q. They also include drilling operations. They
 25 would have a drilling contractor. In their

Page 12

1 case it is Noble Drilling who would provide
 2 personnel on board. There would be a fairly
 3 substantial number of employees in that case.
 4 In addition they would contract services,
 5 something they refer to as fabric maintenance.
 6 They would be people that would do some of the
 7 scaffolding work and whatnot. They would have
 8 a group of people, and that number may vary
 9 with that particular supplier. Even in the
 10 drilling world there would be specialist
 11 services, the mud systems on the drilling
 12 units would have their contractor associated
 13 with the supply of the mud systems, and some
 14 of the other--as they go through completions
 15 of a well, there are specialized companies
 16 that deal with the completion of an offshore
 17 production well, so each of these employers
 18 would have employees on board. They may not
 19 have their own supervision on board. The
 20 contractors may come under the supervision of
 21 another employer or the operator themselves.
 22 This is a model that has been used quite
 23 effectively in the North Sea, and we tend to
 24 set it up on the basis of worker
 25 representatives elected from various

Page 13

1 constituencies, and by "constituencies" I mean
 2 you can break the installation up into the
 3 accommodations, so those employees involved in
 4 maintaining the accommodations would have a
 5 representative on this committee. Those
 6 involved in the maintenance function would
 7 have an employee represented on that
 8 committee. If there's production going on,
 9 there would be a representative from the
 10 production piece, and if you were drilling it
 11 would be from the drilling. So again as
 12 indicated it's a successful model that's been
 13 used in the North Sea, and we've seen a good
 14 success with it here as well. It's a
 15 committee like any other committee. Its
 16 effectiveness is very much dependent on those
 17 people who sit on it. We work with the
 18 committees to encourage and support them in
 19 their work. These committees are an important
 20 tool to assess and review what is happening on
 21 a day-to-day basis in the workplace. In
 22 addition, we hold an annual workshop which
 23 brings together the Joint Occupational Health
 24 and Safety Committees from each installation,
 25 and we bring them together once a year, or

Page 14

1 actually twice a year, to cover off both
 2 rotations.
 3 ROIL, Q.C.:
 4 Q. Sorry, rotations, that's, I think, a new
 5 expression for us so -
 6 MR. PIKE:
 7 Q. Okay, the work cycle in the offshore here
 8 tends to be a 12-hour day and a 21-day work
 9 period, so you would work for 21 days and you
 10 would be off for 21 days.
 11 ROIL, Q.C.:
 12 Q. And when you're off you come ashore.
 13 MR. PIKE:
 14 Q. You would come ashore, right, so you tend to
 15 have two groups. We'd like to look at it as
 16 one committee. Occasionally, as I indicated,
 17 these are people--and they don't always do
 18 that, but we look at it as one committee.
 19 Occasionally it may operate as two, but we try
 20 to get them to work together so they are
 21 operating as one committee.
 22 ROIL, Q.C.:
 23 Q. Are there any challenges in getting people who
 24 are working on alternate shifts, if you will--
 25 I'm not sure if "shift" is the word that the

Page 15

1 industry would use. Are there any challenges
 2 in getting them together as a group of one?
 3 MR. PIKE:
 4 Q. As indicated, during the annual workshops we
 5 actually hold two and we're able to then
 6 capture both rotations of offshore workers
 7 and, you know, at these meetings we discussed
 8 issues of concern and share best practices
 9 that have been going on. I think they've been
 10 reasonably successful.
 11 ROIL, Q.C.:
 12 Q. So again now to what purpose--sorry, does the
 13 C-NLOPB sit on these Joint Occupational Health
 14 and Safety Committees?
 15 MR. PIKE:
 16 Q. No, these would be workplace committees. They
 17 are internal to the workplace.
 18 ROIL, Q.C.:
 19 Q. Okay, but the committee minutes are sent to
 20 you, are they?
 21 MR. PIKE:
 22 Q. They are.
 23 ROIL, Q.C.:
 24 Q. Okay then, for what purpose then do you
 25 receive them, or what do you do with them when

Page 16

1 you get them?
 2 MR. PIKE:
 3 Q. We would monitor them again to note what
 4 issues are being raised in the workplace, and
 5 to ensure that they're being resolved
 6 effectively.
 7 ROIL, Q.C.:
 8 Q. If they are not resolved, what if anything can
 9 you do?
 10 MR. PIKE:
 11 Q. We would follow up with an inspection or an
 12 audit and take a look at those incidents
 13 ourselves, and if we're not satisfied with
 14 what's happening we would raise it as a non-
 15 conformance.
 16 ROIL, Q.C.:
 17 Q. Okay, and who is expected to be the primary or
 18 the first addresser of the issues that are
 19 raised?
 20 MR. PIKE:
 21 Q. It would be the operator. As I mentioned, we
 22 also receive monthly statistical reports.
 23 Injury statistics are collected from the
 24 operators on a monthly basis and prepared in a
 25 report, which must be filed on the 15th of

Page 17

1 each month. The reports include the number,
 2 or what is called exposure hours, the person
 3 hours worked, and the number of reportable
 4 injuries. These are injuries that result in a
 5 person not being able to complete all their
 6 duties during the next shift. This is further
 7 broken down into lost time and restricted work
 8 injuries. The report also gives the number of
 9 medical aids and first aids. The report also
 10 includes the number of lost time and
 11 restricted work days. The number of days an
 12 individual is off will give you some
 13 indication of the severity of the injury. All
 14 the information is kept in a database, which
 15 we use for a variety of assessments and
 16 purposes. The data allows the calculation of
 17 reportable injury rate per million hours
 18 worked. This rate is used in various reports.
 19 It also provides a picture of the workplace
 20 safety and health and enables us to determine
 21 trends or identify problems. These are
 22 generally referred to as lagging indicators,
 23 and they are the most common used to measure
 24 safety, but they do have their limitations.
 25 Again you're measuring something that has

Page 18

1 already happened as opposed to being in a mode
 2 of preventing it, so again they're referred to
 3 as lagging indicators. We have tried to
 4 develop, and are looking at things called
 5 leading indicators, which will give you an
 6 advanced sort of warning of what's going on.
 7 These are important. They have limitations,
 8 but that's not to say that we ignore them, and
 9 they do involve the injury of people and we
 10 certainly don't want to see that but they do,
 11 as I indicated, have their limitations, and if
 12 I could take a quote from Tom Peters in his
 13 book, "In Search of Excellence," "What gets
 14 measured gets done." Putting a measure on
 15 something is tantamount to getting it done.
 16 It focuses management attention on that area.
 17 The information is simply made available and
 18 people respond. The limitation of lost time
 19 injury rates was never so clearly illustrated
 20 as in the cases of the explosion at the Texas
 21 City Oil Refinery in March of 2005. Fifteen
 22 people were killed and 170 were injured. The
 23 Texas City Oil Refinery had one of the better
 24 lost-time injury rates in the United States.
 25 Management, and it came out in two reports,

Page 19

1 were relying on this picture to feel that they
 2 had a safe facility when in fact they had
 3 significant problems in their process safety.
 4 ROIL, Q.C.:
 5 Q. So they were looking back constantly.
 6 MR. PIKE:
 7 Q. They were looking back, and again, I think, as
 8 we go back to our definition of safety, it is
 9 the appropriate equipment, proper procedures,
 10 and competent personnel. In the case of lost-
 11 time injuries, all you're looking at is the
 12 personnel component. You're tending to ignore
 13 the procedures and the equipment, and in the
 14 case of Texas City there were failings in both
 15 those areas.
 16 ROIL, Q.C.:
 17 Q. Okay.
 18 MR. PIKE:
 19 A. Further in Australia, the Longford gas plant
 20 explosion in September of 1998, two people
 21 were killed. Eight were injured, and the gas
 22 supply was lost to the city of Melbourne and
 23 most of the state of Victoria for two weeks.
 24 Their electrical generation was on gas, so
 25 this was a significant event. Again the

Page 20

1 Longford gas plant had an enviable lost-time
 2 injury rate, but in hindsight they had
 3 significant issues with their process safety.
 4 So while these are important and we need to do
 5 it for the protection of the workers, they are
 6 not the only things, so if you're focusing
 7 only on lost-time injuries you will not get
 8 the full picture of safety in the offshore or
 9 in the onshore. A quick point on the exposure
 10 hours, neither the Labour Standards Board or
 11 the Labour Relations Board governs the working
 12 hours on the offshore installation. In the
 13 case of those workers under a collective
 14 agreement, it would be a Labour Relations
 15 Board. In all other cases, it would be the
 16 Labour Standards Board.
 17 ROIL, Q.C.:
 18 Q. So does the C-NLOPB monitor the hours of the
 19 offshore workers by itself?
 20 MR. PIKE:
 21 Q. No.
 22 ROIL, Q.C.:
 23 Q. Okay.
 24 MR. PIKE:
 25 Q. That would not be one of our prime--and I'll

Page 21

1 talk a little bit more about that.
 2 ROIL, Q.C.:
 3 Q. Okay.
 4 MR. PIKE:
 5 Q. The labour standards legislation has a
 6 provision for a day of rest per week with a
 7 maximum working hour of 16 hours. All
 8 offshore installations, as I noted earlier,
 9 are on a 12-hour shift and a 21-day rotation,
 10 so working offshore for 21 days. When an
 11 exemption is requested from the day-of-rest
 12 provision--so obviously if you're working
 13 seven days a week you need an exemption from
 14 that day-of-rest provision--that application
 15 is made to the Labour Standards Board, and
 16 when the Labour Standards Board receives one
 17 of those applications, they ask the opinion of
 18 the Canada Newfoundland and Labrador Offshore
 19 Petroleum Board, and we would provide the
 20 opinion with regard to the safety of the shift
 21 schedule being provided. The Labour Standards
 22 Board receives a quarterly report from each
 23 installation under its jurisdiction. They
 24 forward us a copy of that report, and we would
 25 look at it for trends. Our interest in it

Page 22

1 really comes twofold. While our drilling
 2 regulations do have provisions specifying a
 3 maximum 12-hour shift, another of our
 4 requirements--the C-NLOPB interest from the
 5 draft occupational health and safety
 6 regulations, requiring that no employee work
 7 where the employee's ability to function is
 8 impaired as a result of fatigue, illness,
 9 alcohol, drugs, or other condition, and again
 10 fatigue would be the issue we would be looking
 11 at with regard to the number of hours worked
 12 and the length of the stay, so we have an
 13 indirect interest. The direct hours would be
 14 governed by either the Labour Standards or
 15 Labour Relations, and we would have an
 16 interest from the standpoint of putting the
 17 worker at risk.
 18 ROIL, Q.C.:
 19 Q. Now the Commissioner in his opening statement
 20 referred to the fact that he got out to the
 21 rig, to the facility, and the weather closed
 22 in and he wasn't--the weather closed in in St.
 23 John's, I think, and he was not able to get
 24 off for an extra day. Does that kind of issue
 25 involving helicopter transport create issues

Page 23

1 in terms of the workforce and the amount of
 2 time that people work?
 3 MR. PIKE:
 4 Q. It can. Obviously, after you finish 21 days
 5 of work you're anxious to get home after that
 6 period, so there are some concerns in that
 7 regard, but it's one of the facts of life when
 8 you live in Newfoundland that you don't always
 9 get to travel when you want. That's part of
 10 what shows up in those quarterly reports of
 11 the Labour Standards Board as the number of
 12 days that that's occurred and the number of
 13 days that folks may have been held over. Once
 14 the fog comes in, there is a protocol in place
 15 and each of the operators is slightly
 16 different as to when they would start
 17 transporting people by marine vessel, so if it
 18 looks as though the weather is going to close
 19 in for a longer period of time, they would
 20 start transferring folks by marine vessel.
 21 There have been situations, more particularly
 22 in the construction mode, where workers have
 23 worked for up to 28 days offshore, and
 24 reports--there's no clear evidence around this
 25 piece, but there have been different reports

Page 24

1 indicating different problems with this, and
 2 this is something we've been looking at for a
 3 number of years, and the different reports
 4 seem to be saying different things, and I
 5 believe I understand you were in Montreal at a
 6 conference and there was some discussion about
 7 shifts and the hours worked and what issues
 8 there were around fatigue. I know the Health
 9 and Safety Executive has done some research on
 10 this piece. One of the ones they looked at
 11 and concern they raised was something referred
 12 to as short-shifting. A worker may go
 13 offshore and started on nights, and then
 14 partway through his 21-day rotation shift over
 15 to days. That was a concern for them, and
 16 we've had some discussions with offshore
 17 operators, and indeed on the Hibernia platform
 18 now they would run a full rotation, 21 days on
 19 nights, rather than do the short-shift and go
 20 over to days. Some resistance from the
 21 workforce initially, but I think everybody is
 22 very comfortable with that particular rotation
 23 now, and we encourage the other operators to
 24 look at similar-type rotations.
 25 ROIL, Q.C.:

Page 25

1 Q. Okay, we're getting a little away from our
 2 core mandate.
 3 MR. PIKE:
 4 Q. Yeah.
 5 ROIL, Q.C.:
 6 Q. And I want to bring us back there a little
 7 bit. With respect to the Joint Occupational
 8 Health and Safety Committees and the monthly
 9 statistical reports, do those reporting pieces
 10 of the entire safety puzzle, do they focus on
 11 or they able to focus on issues involving
 12 helicopter transportation?
 13 MR. PIKE:
 14 Q. Certainly. The Joint Occupational Health and
 15 Safety Committee have raised issues with
 16 regard to helicopter transport in the past,
 17 everything from concerns with the helicopter
 18 suits, some concerns related to the
 19 helicopters themselves, and they have normally
 20 been addressed by the operator.
 21 ROIL, Q.C.:
 22 Q. And so there is not a separate Occupational
 23 Health and Safety--or Joint Occupational
 24 Health and Safety Committee that is focused on
 25 the transportation piece. It is a part of the

Page 26

1 overall piece.
 2 MR. PIKE:
 3 Q. The workers would have it discussed on the
 4 installation. I can't speak to what Cougar
 5 may have with regard to their Joint
 6 Occupational Health and Safety Committee.
 7 ROIL, Q.C.:
 8 Q. That would deal with their employees, would
 9 it?
 10 MR. PIKE:
 11 Q. That would deal with their employees.
 12 ROIL, Q.C.:
 13 Q. Yes.
 14 MR. PIKE:
 15 Q. Although there would be another committee
 16 looking at what was happening with
 17 transportation, but from a different
 18 perspective.
 19 ROIL, Q.C.:
 20 Q. Yes, but from the perspective of the offshore
 21 worker issues surrounding helicopter
 22 transportation concerns can, are, and have
 23 been brought up at these Joint Occupational
 24 Health and Safety Committees?
 25 MR. PIKE:

Page 27

1 Q. Yes.
 2 ROIL, Q.C.:
 3 Q. Okay.
 4 MR. PIKE:
 5 Q. And they've also been brought up at our annual
 6 Joint Occupational Health and Safety meetings
 7 as well.
 8 ROIL, Q.C.:
 9 Q. Yes.
 10 MR. PIKE:
 11 Q. Workshops.
 12 ROIL, Q.C.:
 13 Q. And, similarly, the monthly statistical
 14 report, would that have the opportunity or
 15 even a focus on the transportation piece?
 16 MR. PIKE:
 17 Q. We would not tend to see the transportation
 18 piece there. The exception--well, no, we
 19 wouldn't see it as a discreet item within the
 20 monthly statistical report. It would show up
 21 in incident reporting, and we'll discuss that
 22 one in a moment.
 23 ROIL, Q.C.:
 24 Q. Okay, incident reporting, I think, is the next
 25 tool that you have in terms of monitoring?

Page 28

1 MR. PIKE:
 2 Q. Yes. The operators are required to
 3 investigate every incident, and a key piece we
 4 have is our new incident and investigation
 5 guidelines, and they would define what we
 6 would look at as an incident, and it's a
 7 fairly extensive list. If you like, we can
 8 take a look at the guideline and just sort of
 9 quickly run through some of those things that
 10 we would call an incident.
 11 ROIL, Q.C.:
 12 Q. Okay.
 13 MR. PIKE:
 14 Q. Now these are relatively new so I'm not as
 15 familiar as I am with the very short list that
 16 is actually on the slide. There is a rather
 17 extensive list in the new guidance,
 18 "fatalities, missing persons, major injuries,
 19 lost and restricted work day injuries,
 20 occupational illnesses, medical treatment."
 21 MR. WHALEN:
 22 Q. Are we going to a -
 23 ROIL, Q.C.:
 24 Q. Just one second, I'm trying to see if we have
 25 the -

Page 29

1 MS. FAGAN:
 2 Q. I think it's 48.
 3 ROIL, Q.C.:
 4 Q. Sorry, number?
 5 MS. FAGAN:
 6 Q. Forty-eight.
 7 ROIL, Q.C.:
 8 Q. Number 48. Yes, Number 48. Again the
 9 registrar will open it for you, and then I
 10 think you can--the document that is in front
 11 of you, you can now control, sir.
 12 MR. PIKE:
 13 Q. Okay.
 14 ROIL, Q.C.:
 15 Q. You say this is new. The date on it there is
 16 June 1st, 2009.
 17 MR. PIKE:
 18 Q. The 1st, yes.
 19 ROIL, Q.C.:
 20 Q. Okay. Was there a protocol before that and
 21 this is a replacement, or is it a brand new
 22 one?
 23 MR. PIKE:
 24 Q. A couple of notes here, we've done it jointly
 25 with Canada Nova Scotia Offshore Petroleum

Page 30

1 Board.
 2 ROIL, Q.C.:
 3 Q. Oh yes, I see their logo is on the top of that
 4 sheet as well.
 5 MR. PIKE:
 6 Q. Yes, and in addition to that we've combined
 7 the reporting of environmental incidents in
 8 this document as well, so it is a joint safety
 9 and environmental document as well.
 10 ROIL, Q.C.:
 11 Q. So the expression, "incidents," here would
 12 include environmental incidents and safety
 13 incidents.
 14 MR. PIKE:
 15 Q. It would.
 16 ROIL, Q.C.:
 17 Q. Thank you.
 18 MR. PIKE:
 19 Q. And the requirement to do the reporting.
 20 ROIL, Q.C.:
 21 Q. Yes.
 22 MR. PIKE:
 23 Q. Here's the standard parts of purpose and
 24 scope, the authorities, referring to some of
 25 the regulations that are being called up to

Page 31

1 require the reporting of incidents, the
 2 definitions.
 3 ROIL, Q.C.:
 4 Q. Just scan back there for a moment. I saw one
 5 come up saying "reporting by employees."
 6 MR. PIKE:
 7 Q. Yes. "When an employee becomes aware of an
 8 incident, the employee shall report the
 9 occurrence to the operator, employer, or both.
 10 To ensure that the employees report all
 11 incidents, the operator shall define reporting
 12 protocols and ensure that a mechanism and
 13 culture are in place that will encourage
 14 everyone to report. The legislation prohibits
 15 operators, employers, unions, and other
 16 parties from subjecting workers to
 17 discrimination of any kind for reporting
 18 health and safety hazards or incidents.
 19 Operators should ensure that the mechanisms in
 20 place for reporting do not result in any undue
 21 hardship for employees." That's a more recent
 22 addition to the guidance, but it would have
 23 been already there and just not as clear
 24 previously.
 25 ROIL, Q.C.:

Page 32

1 Q. Okay.
 2 MR. PIKE:
 3 Q. And it talks in terms of the culture, and one
 4 of the things, the recommendations that came
 5 out of both--the Texas City Refinery explosion
 6 recommendations talks in terms of safety
 7 culture, which again talks about the openness
 8 to be able to report such incidents, and what
 9 is ingrained in that--we know culture is sort
 10 of one of those difficult topics to fully
 11 define, but it talks in terms of what is the
 12 accepted norms in the workplace for the way to
 13 behave and the way to work. "The
 14 investigation team of an incident. The
 15 investigation team should include
 16 representatives of the operator, the facility
 17 owner, the committee or a representative if
 18 there is not a committee in place, and other
 19 expertise as required. The lead investigator
 20 should formally be trained," so again a Cougar
 21 work representative in any investigation team,
 22 and again, we talk about that idea of getting
 23 to the root cause of incidents. These are
 24 some of the other agents that would receive an
 25 incident report, the Joint Rescue Coordination

Page 33

1 Centre, that would be the one in Halifax; the
 2 Marine Rescue Sub-Centre, which is based in
 3 St. John's; the Canadian Coastguard; Transport
 4 Canada, Marine Safety; and the RCMP.
 5 "Emergency Notification," this would be
 6 something that would be required to be called
 7 into our duty phone immediately or as soon as
 8 possible. A fatality, missing person, major
 9 injury, medical evacuation, or as what's
 10 referred to in the industry as a Medevac--and
 11 the helicopter provider would be providing
 12 those Medevacs. Fire explosion, collision,
 13 loss of well control, major hydrocarbon
 14 release, that's a new reporting piece that
 15 we've brought in and it's based essentially
 16 from the North Sea. They were looking at ways
 17 to try to bring up and measure process safety,
 18 and one of the proxies that they have
 19 established is the release of hydrocarbons.
 20 It gives an indicator of the state of a
 21 process plant. "Spills Requiring Emergency
 22 Notifications," so there's a distinguishing
 23 between the size of the spill which would
 24 require immediate notification. "Adverse
 25 Environmental Conditions," we'll talk a little

Page 34

1 bit more about that when we hit those.
 2 "Security and Major Damage and Impairment" -
 3 ROIL, Q.C.:
 4 Q. You mentioned in passing there, and I see it
 5 on the screen, a reference to the "duty
 6 phone." What facility is that and how is that
 7 maintained?
 8 MR. PIKE:
 9 Q. We have a officer on duty twenty-four hours a
 10 day, seven days a week. They carry a cell
 11 phone. It also has a back-p voice messaging
 12 system, and they are able to receive calls
 13 from the offshore on a 24-hour-day, you know,
 14 365-day-a-year basis.
 15 ROIL, Q.C.:
 16 Q. Okay, and what kind of purposes would you
 17 expect that that could be used for from time
 18 to time?
 19 MR. PIKE:
 20 Q. It would be--you know, one of the prime
 21 examples here is that we would have received
 22 notification on the incident that occurred on
 23 March 12th when the helicopter went down.
 24 That would be called in to that number, and we
 25 would have been notified through the duty

Page 35

1 phone of that.
 2 ROIL, Q.C.:
 3 Q. Okay.
 4 MR. PIKE:
 5 Q. And again those style of incidents would be
 6 the ones that would be required to be
 7 immediately reported. Other than that, the
 8 operator can fill out a form and submit it,
 9 notifying us of an incident within 24 hours,
 10 and we have established under this new
 11 guidance an e-mail account where an operator
 12 can file such other reports. That's the
 13 written notification and it makes reference to
 14 our e-mail account on them, where those can be
 15 submitted, and I think similarly Nova Scotia
 16 has a similar process, and some of the basic
 17 information that would be required on those
 18 reports. The incident classifications, we in
 19 part--we are members of an international
 20 regulators forum. It's a group of
 21 international offshore petroleum safety
 22 regulators who meet on an annual basis, and
 23 it's an informal group. It has no formal
 24 structure or formal mandate to meet, but we
 25 meet on an annual basis and look at different

Page 36

1 issues relating to offshore safety. Several
 2 years ago we identified a desire to be able to
 3 compare some of these statistics in the
 4 different regions, and found that the
 5 definitions were very much different in
 6 different regions, not unlike trying to
 7 compare incidence statistics within Canada.
 8 Now they're collected differently in each
 9 province so making comparisons becomes
 10 difficult, so working with that group we've
 11 developed a series of definitions for
 12 different incidents, and we've tried to
 13 incorporate those into our latest guidance.
 14 Interestingly enough, there was some
 15 discussion as to how we would relate a
 16 fatality, but I think it relates more as to
 17 what is working off shift and on shift.
 18 "Missing Persons, a Major Injury," and we have
 19 some definitions around that. "Amputation,
 20 Skeletal Injuries, Burns, Injuries to Internal
 21 Organs, Eyes Injuries," so there's a number of
 22 those, and it gives a much better definition
 23 than we had previously on what would be
 24 required to be reported. "A loss due to
 25 restricted work day injury and occupational

Page 37

1 injury other than a major injury which results
 2 in a person being unfit for work any day after
 3 the day of occurrence of the injury, or unfit
 4 for full performance of their regular duties
 5 on the day after the injury." Any days
 6 includes day of rest, so even if it was their
 7 last day of a 21-day rotation and they were
 8 injured, if they would not have been able, if
 9 the next day had been a regular work day, to
 10 perform those duties, that would also be
 11 considered an injury. Some jurisdictions
 12 wouldn't have considered that injury because
 13 they would have been off and wouldn't have
 14 been--but we count them that way.
 15 "Occupational Illnesses, Medical Treatment and
 16 First Aids," so we're distinguishing between
 17 the two. "First Aid" is a relatively
 18 straightforward piece, splinters, minor
 19 treatment, and then anything that requires
 20 further treatment that's less than a lost time
 21 injury would be considered a medical treatment
 22 injury.
 23 ROIL, Q.C.:
 24 Q. And again to bring our focus back to
 25 helicopter transportation, an injury happening

Page 38

1 from the time that the worker checks in to a
 2 time that the worker gets back at the end of
 3 his 21-day rotation -
 4 MR. PIKE:
 5 Q. Would be counted.
 6 ROIL, Q.C.:
 7 Q. That would be counted. That would be expected
 8 to be reported.
 9 MR. PIKE:
 10 Q. An injury that occurs anywhere in that
 11 transit, either getting onto the helicopter--
 12 getting off the helicopter or on the
 13 helicopter, would be recorded. A reference to
 14 how we define the Medevacs, the fire and
 15 explosion piece, collisions, well control, or
 16 loss of well control, the hydrocarbon release,
 17 a fairly extensive definition around
 18 hydrocarbon releases. A spill would be more
 19 of an environmental incident.
 20 ROIL, Q.C.:
 21 Q. Yes.
 22 MR. PIKE:
 23 Q. "Unauthorized Discharge," again an
 24 environmental incident. I'll stop for a
 25 moment on "Adverse Environmental Conditions."

Page 39

1 "It's a forecast or an actual physical,
 2 environmental conditions, or icebergs, pack
 3 ice that may result in or have resulted in
 4 loads or load effects in excess of those for
 5 which the offshore installation vessel or
 6 aircraft was designed shall be reported to the
 7 relevant board by an emergency notification
 8 process in Section--the relevant boards shall
 9 also be notified by the emergency notification
 10 process if precautionary measures such as
 11 down-manning"--so that would be reducing the
 12 number of personnel offshore, "securing the
 13 well in the depressurizing of flow lines is
 14 performed due to the threat of the physical
 15 environmental condition."
 16 ROIL, Q.C.:
 17 Q. When you use the expression, "the relevant
 18 board," I take it, that that word, "relevant,"
 19 is put in front of "the board" because you're
 20 dealing both Nova Scotia and Newfoundland and
 21 Labrador?
 22 MR. PIKE:
 23 Q. That's correct, yes. Because it's a joint
 24 guideline, it has to make reference to both
 25 boards, so in this case if it's in the

Page 40

1 Newfoundland area it would be the Newfoundland
 2 board you would be reporting to.
 3 ROIL, Q.C.:
 4 Q. If an incident happens in the Newfoundland
 5 offshore as was defined by Mr. Andrews, it is
 6 required to be reported to the Newfoundland
 7 board--or the Newfoundland -
 8 MR. PIKE:
 9 Q. Yes. If the incident occurred in the Nova
 10 Scotia offshore, it would be reported to the
 11 Nova Scotia Offshore Petroleum Board.
 12 ROIL, Q.C.:
 13 Q. Right.
 14 MR. PIKE:
 15 Q. "Security," we'll talk about a little bit
 16 later. "Major Damage and Impairment,
 17 impairment of critical equipment, failure to
 18 run successful tests of safety system of
 19 reduction installation or any component of the
 20 safety systems, impairment of firefighting or
 21 lifesaving equipment failure, low-bearing
 22 parts of containers, lifting devices, elevator
 23 and devices, or loose lifting gear." "Near
 24 Misses," we've provided some definition around
 25 the near misses. Sometimes near misses can

Page 41

1 tell us a lot as well.
 2 ROIL, Q.C.:
 3 Q. The expression "near miss" is one that is
 4 often used in the aviation context. Does it
 5 only have an aviation context here?
 6 MR. PIKE:
 7 A. No, it would not be the same definition as
 8 used in the aviation context, although there
 9 may be some similarities and we would--it
 10 could capture aviation pieces if there was
 11 something there or some of them, but not all
 12 of them. We did take a look at, I believe
 13 Transport Canada, we became aware only this
 14 year that Transport Canada has a database of
 15 all such incidents. When we did a comparison,
 16 we have some of those incidents, but we do not
 17 have all of them. Some of them would qualify
 18 for requiring for reporting under Transport
 19 Canada's rules, but they would not be required
 20 to report it under our rules. And that just
 21 goes on further to talk about what's in the
 22 reports themselves. So a fairly extensive
 23 list and better definition in this report on
 24 what needs to be required to be reported.
 25 ROIL, Q.C.:

Page 42

1 Q. Okay, if you want to go back to your slide, I
 2 think the Registrar can probably bring that
 3 back up for you if you are finished with the
 4 review of that document.
 5 MR. PIKE:
 6 A. Yes.
 7 ROIL, Q.C.:
 8 Q. We'll let her do that and -
 9 MR. PIKE:
 10 A. It's our opinion that the reporting is
 11 generally good from all operators. However,
 12 there is a learning curve. When operators
 13 start in our area, initially they tend to
 14 focus only on the occupational health and
 15 safety regulations and for reporting
 16 requirements there. This does not include the
 17 requirement for reporting significant events
 18 or the near misses which occur in some of the
 19 other regulations. This requirement is
 20 captured under the other regulations, as I
 21 noted. The key to such reporting and possible
 22 investigation is to find the root cause. This
 23 is particularly important in cases that we see
 24 where there are potential trends or repeat
 25 problems. I think I noted in there that the

Page 43

1 worker representative, it is our expectation
 2 that the worker representative be part of that
 3 and would sign off on any incident report that
 4 we receive. If we don't see that the worker
 5 representative has been privy to that one, we
 6 would send the report back as being
 7 incomplete.
 8 ROIL, Q.C.:
 9 Q. With respect to incident reporting and
 10 excluding the events of March 12th, 2009, was
 11 the Board aware of any pattern or significant
 12 injuries or near misses or anything else with
 13 respect to helicopter transportation over the
 14 last number of years--I don't mean to confine
 15 it to just now or this particular airframe,
 16 but in the totality of the Board's experience
 17 with helicopter transportation.
 18 MR. PIKE:
 19 A. I'll just take a moment to refer to some notes
 20 that I have. We have had some notifications
 21 on incidents. We did not in any depth follow
 22 them up, they would have fitted more squarely
 23 within the purview of Transport Canada
 24 Aviation and we would have relied on their
 25 follow up for some of those incidents. There

Page 44

1 have, over the years, been issues with the
 2 airframes, either problems with the engines or
 3 some issues around warning lights that would
 4 have grounded the helicopter in the offshore,
 5 we've seen some of those. But again, we would
 6 have relied on Transport Canada Aviation to
 7 follow up on those particular incidents.
 8 ROIL, Q.C.:
 9 Q. Okay, I think you're up to about slide 25, I
 10 don't think they're numbered on the back or on
 11 the bottom, but you can bring us up to the
 12 26th, I guess, is the next one.
 13 MR. PIKE:
 14 A. Compliance and enforcement. One of the
 15 principle compliance tools used by a safety
 16 officer is the safety audit and inspection or
 17 inspection. This process has evolved over the
 18 years. In the late 80s, the Board contracted
 19 the International Loss Control Institute to
 20 develop a safety auditing tool. The auditing
 21 tool was found to have some limitations but
 22 over time, we have adapted it to better align
 23 with our regulatory requirements. Until
 24 recently, a safety officer would conduct a
 25 focused audit where we would take one of the

Page 45

1 safety assessment elements and audit against
 2 it. We would, over time, audit all safety
 3 assessment elements; however, we began to find
 4 it more difficult to finish a complete cycle.
 5 After the independent review team report, we
 6 began conducting systems audits with two
 7 safety officers as a team and then safety
 8 inspections in between audits. The audit
 9 would look at the system as a whole or the
 10 safety plans, so instead of taking a single
 11 element within the safety plan, we would look
 12 at the overall plan. And the inspections
 13 would follow up on corrective actions. We'll
 14 talk a little bit more on how we put those
 15 together in a few moments. Another of the
 16 recommendations from the internal review or
 17 the independent review team was a closer
 18 corroboration with our Environmental Affairs
 19 Department.
 20 ROIL, Q.C.:
 21 Q. The independent review team that you talked
 22 about here on a couple of occasions, that's
 23 the same one that you were speaking of
 24 earlier, the norwegian peer review?
 25 MR. PIKE:

Page 46

1 A. Yes, the independent review team from Norway.
 2 Over the last year and a half we have been
 3 conducting integrated audits using a team
 4 consisting of two environmental compliance
 5 officers and two safety officers. This has
 6 resulted in a more comprehensive audit, the
 7 process is still evolving and still being
 8 worked. We continue with regular safety
 9 inspections to follow up between audits. The
 10 department established a formal process for
 11 all health and safety regulated complaints in
 12 2006. Prior to 2006, while there was no
 13 formal process, the disposition of complaints
 14 was documented in internal memos. Since 2006,
 15 there have been 30 complaints formally
 16 registered with the department, four of those
 17 complaints were related to helicopter
 18 operations; two related to concerns that
 19 operators were putting undue pressure on
 20 Cougar Helicopters to conduct flights. Our
 21 investigations, while that may have been a
 22 concern of the workers, we saw no evidence of
 23 that, that Cougar was succumbing to any
 24 pressure. One related to the sizing of flight
 25 suits and an interesting one that related to

Page 47

1 the failure of the Board to make a public
 2 stand prior to the resumption of helicopter
 3 flights. Workers were very much concerned
 4 with offshore flights and that's obvious from
 5 that particular concern.
 6 ROIL, Q.C.:
 7 Q. That's the resumption of helicopter flights
 8 following the March 12th incident.
 9 MR. PIKE:
 10 A. Incident, yes. Defined security audits have
 11 been a feature of our work post 911, so since
 12 September 11, 2001 and those incidents we'll
 13 talk a little bit about those in a moment. As
 14 previously discussed, the process starts with
 15 the pre-authorization safety audit. We audit
 16 or inspect the operator after the
 17 authorization is issued approximately every
 18 three months; however with geophysical or one
 19 of the seismic authorizations, we would likely
 20 audit or inspect that as often. We may but
 21 rarely do look at it once the authorization is
 22 issued, unless we have reason to do so. We
 23 continue to monitor the operator's compliance
 24 with the legislation and the safety plan.
 25 Something to note here is that our job is not

Page 48

1 hands off. We are as dependent on the safety
 2 of the installations as those who work on them
 3 every day. We travel to the offshore using
 4 the helicopter transport, so in fact every
 5 time we go offshore, there is a review of
 6 helicopter operations and we'll talk a little
 7 bit more about that. There are two types of
 8 non-conformances that we use in our safety
 9 audit reports and inspections. An observation
 10 is a statement of fact, that may be as simple
 11 as if we're looking at the permit to work
 12 system or the control of work. We would tend
 13 to look at what permits are out, it could be
 14 as simple as the permit has not been
 15 appropriately filled out. They have a permit,
 16 but the permit was not filled out
 17 appropriately, or if we come across a worker
 18 activity that does not have a permit, that
 19 would be a more significant concern, or if we
 20 saw that there was multiple work permits that
 21 again had individual problems, that would lead
 22 us potentially to a finding.
 23 ROIL, Q.C.:
 24 Q. So an observation is simply an observation of
 25 fact.

Page 49

1 MR. PIKE:
 2 A. Statement of fact, we went out, we looked at a
 3 work permit, it was not completed correctly.
 4 ROIL, Q.C.:
 5 Q. Can you bring an example of an observation
 6 that might relate to the helicopter transport
 7 type of scenario just so we can focus on what
 8 might be an observation that the Board could
 9 make with respect to helicopter
 10 transportation.
 11 MR. PIKE:
 12 A. We arrive at the heliport and they are
 13 dispensing the flight suits. If we were to
 14 see that somebody was receiving a suit that
 15 did not, to us, look like it was fitting, that
 16 would be an observation.
 17 ROIL, Q.C.:
 18 Q. Okay.
 19 MR. PIKE:
 20 A. If they didn't run the pre-safety video, that
 21 would be an observation. If during the flight
 22 we saw that individuals were not following the
 23 instructions of the pilots, that would be an
 24 observation. If we landed on the helideck and
 25 noted that the firefighting team wasn't there,

Page 50

1 that would be an observation. So if there is
 2 anything we see as we go through that process
 3 that is not as per the procedures, we would
 4 note that as an observation. Some of those
 5 would constitute what we refer to as a
 6 significant implication for safety and that
 7 could generate a finding. So the finding,
 8 which is the other non-conformance we use, is
 9 a conclusion substantiated by one or more
 10 observations and as I indicated, that has
 11 significant implications for safety. Since
 12 1997 -
 13 ROIL, Q.C.:
 14 Q. Okay, so 1997 is the beginning of your
 15 measurement period here, is it?
 16 MR. PIKE:
 17 A. Yes, essentially that was when the Hibernia
 18 platform moved offshore and started
 19 operations.
 20 ROIL, Q.C.:
 21 Q. Okay.
 22 MR. PIKE:
 23 A. There have been 261 audits or inspections
 24 generating approximately 4000 observations.
 25 Of those, 178 observations have been raised

Page 51

1 against helicopter operations in some form, so
 2 they would be the ones that I've just sort of
 3 identified, either an issue, a heliport, an
 4 issue on the helideck -
 5 ROIL, Q.C.:
 6 Q. Or even an in-flight issue.
 7 MR. PIKE:
 8 A. Or an in-flight issue. There were several
 9 raised--the original systems had what they
 10 called a flight entertainment system which
 11 provided music for the workers as they
 12 travelled offshore. We were finding that they
 13 were somewhat problematic in that some
 14 headsets weren't working on occasion, so that
 15 has all been changed out now and we now have a
 16 system in the cabin so that the instructions
 17 from the pilot can be clearly heard by all
 18 workers.
 19 ROIL, Q.C.:
 20 Q. It's a broadcast into the cabin system, is it?
 21 MR. PIKE:
 22 A. Yes.
 23 ROIL, Q.C.:
 24 Q. As opposed to a headphone system?
 25 MR. PIKE:

Page 52

1 A. Yes. They still wear headsets for ear
 2 protection, but the broadcast system I
 3 understand is not being used. The original
 4 one was to provide entertainment for the
 5 workers in transit, with the idea that the
 6 announcements could be made, but it was a
 7 system that did have some problems and some of
 8 those observations would have been related to
 9 that. In that time, there have been a total
 10 of 57 findings which remember is a conclusion
 11 substantiated by one or more observations.
 12 There have been zero findings against
 13 helicopter operations.
 14 ROIL, Q.C.:
 15 Q. So the 57 findings out of the 4000
 16 observations -
 17 MR. PIKE:
 18 A. Well no, out of the 261 audits or inspections,
 19 we would have generated 57 findings.
 20 ROIL, Q.C.:
 21 Q. Yes.
 22 MR. PIKE:
 23 A. None of those have been against helicopter
 24 operations.
 25 ROIL, Q.C.:

Page 53

1 Q. Okay.
 2 MR. PIKE:
 3 A. Prior to any audit or inspection, a safety
 4 officer will review outstanding observations
 5 or findings from the previous audit or
 6 inspection. The safety officer would also
 7 review incident reports from any incidents
 8 that have occurred since the last audit or
 9 inspection. The minutes of the joint
 10 occupational health and safety committee are
 11 checked for any outstanding items or recurring
 12 issues. And any open complaints would also be
 13 reviewed. That would be the same for both an
 14 audit and inspection. If we were doing an
 15 audit in addition to that, we would put
 16 together, review the commitments in the safety
 17 plan and more recently with the integrated
 18 audits, it would be a more comprehensive
 19 systems audit. So there would also be--they
 20 would review safety plan in preparation to
 21 audit against it.
 22 ROIL, Q.C.:
 23 Q. To the uninitiated, those of us that don't
 24 work in this world every day, as you do,
 25 what's the difference, the essential

Page 54

1 difference between an inspection and an audit?
 2 MR. PIKE:
 3 A. The audit, we would be going out principally
 4 to review compliance to the safety plan, so we
 5 would be checking, verifying it. The
 6 inspection we were going offshore and it would
 7 be a follow up to a previous audit. If there
 8 are any outstanding observations and again, we
 9 would do some--it would generally be a follow
 10 up and it would not necessarily be looking at
 11 or looking for specific compliance I guess is
 12 the easiest way to describe that.
 13 ROIL, Q.C.:
 14 Q. It's a less formal procedure.
 15 MR. PIKE:
 16 A. It is a less formal procedure, yes.
 17 ROIL, Q.C.:
 18 Q. Okay, but an inspection, I take it, can bring
 19 up concerns for you, just as easily as an
 20 audit can bring up concerns?
 21 MR. PIKE:
 22 A. Yes, there would potentially be a general walk
 23 around to see if there are any items of
 24 concern.
 25 ROIL, Q.C.:

Page 55

1 Q. So upon arrival on an installation, the safety
 2 officer conducts an opening meeting to outline
 3 the purpose of the audit or inspection and
 4 what areas they may want to inspect. So if
 5 we're doing a follow up on an observation, we
 6 may want to go to a particular area to see
 7 what has been done with regard to that
 8 observation or finding. A worker
 9 representative from the Joint Occupational
 10 Health & Safety Committee is part of that
 11 meeting and an offer is made for a worker
 12 representative to accompany the safety officer
 13 on the audit or inspection.
 14 Also during their stay on the
 15 installation, the safety officer meets in
 16 private with the worker representative of the
 17 Joint Occupational Health & Safety Committee
 18 to afford them an opportunity to raise any
 19 concerns that they may have. A closing
 20 meeting would be held prior to departure to
 21 review any observations and concerns noted
 22 during the audit or inspection. A report--and
 23 this is a bit of a change, in our earlier
 24 versions we would have left a report with, on
 25 board the installation before we left. To be

Page 56

1 quite honest, I believe it put too much
 2 pressure on our safety officers to be able to
 3 produce that report while they were still on
 4 board. So our practice now is that that
 5 report is prepared once you are returned to
 6 shore and within five days. It also allows
 7 us--it's a much better process and allows us
 8 to do any follow up on shore, so if there's
 9 something that we weren't quite clear on
 10 offshore, we can do some follow up onshore
 11 with that piece as well. So the final report
 12 of the audit or inspection is provided to the
 13 operator and the Joint Occupational Safety
 14 Committee for that installation. We have, as
 15 noted, an audit summary database that tracks
 16 the status of each of the non-conformance
 17 items. It also allows us if we were seeing
 18 something in this audit that maybe had been
 19 closed in previous audits, it allows us also
 20 to track those kind of items.
 21 ROIL, Q.C.:
 22 Q. By closed, you mean?
 23 MR. PIKE:
 24 A. If two years ago we were out and we saw
 25 particular non-conformance, raised it as an

Page 57

1 item and it got closed -

2 ROIL, Q.C.:

3 Q. Closed meaning dealt with?

4 MR. PIKE:

5 A. Dealt with.

6 ROIL, Q.C.:

7 Q. Yes.

8 MR. PIKE:

9 A. So it was no longer carried as an open

10 observation, that database does allow us to go

11 back and say yes, we saw that several years

12 ago, what's going on, is there a system's

13 problem. Why is this continuing to show up?

14 So it allows us to be able to do that form of

15 analysis.

16 ROIL, Q.C.:

17 Q. You can go back and look at things before,

18 things that are now and if there is a pattern

19 developing, you can see that pattern -

20 MR. PIKE:

21 A. Arising, yes. We could move on to security

22 audits. Since 911, protection of Canada's

23 energy infrastructure has become a priority.

24 Many of the elements respecting security of

25 offshore installations had been subject to

Page 58

1 some scrutiny before then, but the new program

2 has placed them under greater focus and

3 priority. Security would have been considered

4 previously under, as just another one of the

5 risks that needed to be managed in the

6 offshore. The security audit looks at the

7 operator's oversight of their contractors. It

8 is the operator's contractors that hold the

9 key to security of the offshore installations.

10 There is no other way to access the offshore

11 installations except through the heliport and

12 the supply base, which are the gateways to the

13 offshore installations. These gateways are

14 operated by the operator's contractors and

15 form the key to offshore security. As part of

16 our security audit of operators, we have on

17 several occasions to access the heliport

18 security. While not perfect, Cougar exhibited

19 very good performance and with a very active

20 desire to improve. So it demonstrated a very

21 positive culture, in our view, when we did

22 audit those particular facilities.

23 As I mentioned earlier, while our safety

24 officers and environmental compliance officers

25 are not stationed fulltime on offshore

Page 59

1 facilities, these facilities are part of their

2 work environment. They are required to spend

3 days and nights offshore as part of their job.

4 So every offshore audit and inspection

5 includes a trip to the heliport, the same as a

6 worker who is starting rotation. It also

7 means landing on the helicopter deck of the

8 installation and when we leave, taking off

9 from the installation at the completion of the

10 inspection or audit and returning through the

11 heliport. All of these provide the

12 opportunity to observe, assess and review

13 helicopter operations. While helicopter

14 operations may not be the focus of any of

15 those audits, we would note any non-

16 conformances during those visits.

17 ROIL, Q.C.:

18 Q. So if you're going out to audit a particular

19 aspect of an installation, the fact that you

20 travel by helicopter is not, you're not off

21 duty at that time, I take it.

22 MR. PIKE:

23 A. No, we would see if--the focus of that audit

24 was on the installation, but as we went

25 through the heliport or landed on the

Page 60

1 helideck, we noted a non-conformance, that

2 would be noted in that report.

3 ROIL, Q.C.:

4 Q. Okay.

5 MR. PIKE:

6 A. And indeed a number of those that we had

7 raised previously would not have been the

8 focus of the audit.

9 ROIL, Q.C.:

10 Q. Yes.

11 MR. PIKE:

12 A. So in closing, all operators require an

13 approved safety plan before any authorization

14 is issued. Safety plans are systematically

15 assessed before the authorization is issued.

16 Adherence to the safety plan is systematically

17 verified through the activity. Deviations

18 from an approved safety plan are required to

19 be corrected. If not, the authorization can

20 be revoked or the operator can be prosecuted.

21 Mr. Commissioner, I have tried to provide

22 insight of how we do our job. I trust it has

23 been a rational approach to a subject that has

24 a great impact on people, because while we

25 talk about plans, authorizations, processes

Page 61

1 and statistics, our job is about people. For
 2 those lost on that fateful day in March, we
 3 will ever remember them in our hearts, in our
 4 prayers. Mr. Commissioner, thank you for your
 5 attention and I look forward to receiving the
 6 results of your work.
 7 ROIL, Q.C.:
 8 Q. Before we close entirely, Mr. Pike, you in
 9 part of your explanation of things today,
 10 referred to culture and you would have been
 11 here on the opening day when the Commissioner
 12 referred to safety culture. Can you give us
 13 any insights or thoughts on the ability of the
 14 C-NLOPB through these processes to either
 15 monitor, observe or create a safety culture
 16 with respect to work in the offshore and
 17 particularly, I suppose, work with respect to
 18 the transportation of individuals by
 19 helicopter?
 20 MR. PIKE:
 21 A. First and foremost it would be the operator
 22 that would need to develop the culture. We
 23 have looked, there is ongoing research, it is
 24 a newer topic within the safety world. If you
 25 look at the evolution of safety, it would have

Page 62

1 started with safety engineering, focus on the
 2 equipment and that brought us a certain
 3 distance in providing a safer work
 4 environment. In the 50's, there is the start
 5 to look at the safety management systems, a
 6 recognition that the management systems also
 7 played a role and now, more recently, I think
 8 safety culture was first mentioned when the
 9 international atomic regulatory authorities
 10 did the investigation of Chernobyl, that's
 11 essentially the first time safety culture was
 12 actually mentioned in a report. So it's a
 13 fairly recent piece. The legislation is not
 14 sort of clear on that particularly in Canada,
 15 other countries do have some legislation
 16 dealing with safety culture or the promotion
 17 of safety culture. There is ongoing research
 18 in Canada on safety culture. We have availed
 19 of those folks and have looked at the work
 20 that they have done. St. Mary's University,
 21 there is the CN Centre for Occupational Health
 22 and Safety has a researcher that has done a
 23 lot of work on safety culture. We have, on
 24 several occasions, engaged him to have a
 25 discussion as to how you can look at measuring

Page 63

1 safety culture, but it would be something that
 2 we would look at promoting within the
 3 operator, but it is the operators to develop
 4 such a safety culture. Culture cannot be
 5 imposed upon a workplace. We can certainly
 6 encourage it, but we would not be able to
 7 impose it as any culture can be imposed upon
 8 people, so it's something we're looking at.
 9 Indeed as we go forward, we're also looking at
 10 better ways to measure safety. Traditionally
 11 safety regulators measured more in failure
 12 than they are in success, so it's more of what
 13 they haven't done after an incident has
 14 occurred, in as much as what could be done
 15 beforehand or measured beforehand. In
 16 reviewing some of those things, we note that
 17 Norway uses an approach called risk trends
 18 analysis, so we are engaged currently and we
 19 are looking at whether that will work in
 20 Newfoundland and we've engaged Safety Net, the
 21 centre for occupational health and safety
 22 research at Memorial University to assist us
 23 in looking at ways of developing better tools
 24 to measure the risk or the reduction in risk
 25 as the risk trends would be in the offshore.

Page 64

1 So we're looking at various methods, including
 2 safety culture. I'm not sure if that answers
 3 your question.
 4 ROIL, Q.C.:
 5 Q. Well, I think if that is the answer that you
 6 wish to give, that's what I wanted to give you
 7 an opportunity to comment on it because the
 8 Commissioner had indicated that it was of
 9 interest to him and that he was, he made
 10 observations about what he learned at the
 11 Helicopter Safety Conference in Montreal and I
 12 thought that I would give you the opportunity
 13 to comment upon it as well.
 14 MR. PIKE:
 15 A. There was extensive research done on safety
 16 culture in Aberdeen and indeed a researcher at
 17 St. Mary's did original doctoral work in
 18 Aberdeen, so he brings some of that experience
 19 with him. So it's been very informative and
 20 it was something that was looked at very
 21 closely after the Piper Alpha disaster in
 22 1987.
 23 ROIL, Q.C.:
 24 Q. Well allow you to guess at that date.
 25 MR. PIKE:

Page 65

1 A. No, the Piper Alpha would have been '88,
 2 actually, to be quite honest.
 3 ROIL, Q.C.:
 4 Q. Okay, Mr. Commissioner, that is the close of
 5 the direct evidence and information from the
 6 C-NLOPB. Before we complete, though, I want
 7 to make a number of comments about it. We
 8 made a strategic decision a long time ago to
 9 keep this presentation at a very high level
 10 and to not deal, except in a number of small
 11 examples that were given along the way, not
 12 deal with actual audits, actual inspections,
 13 actual results with respect to any of the
 14 operators or the helicopter provider. There
 15 will be an opportunity to do that if it is
 16 appropriate and necessary and so, in doing
 17 this, I am saying to you and to those present
 18 and to the public, that there will be other
 19 opportunity or opportunities as necessary for
 20 Mr. Pike or others from the C-NLOPB to come
 21 back and deal with any items that come up
 22 along the way, but that at this point in time,
 23 rather than get down with looking at an
 24 individual inspection with the company that is
 25 being inspected not having an opportunity to

Page 66

1 talk about what they do until many months from
 2 now, perhaps, it was felt more fair to take it
 3 at a high level now and come into the details
 4 a little later if that is felt necessary for
 5 the purposes of our Inquiry. The other thing
 6 I have to say is that apparently before we--it
 7 is break time anyway, but before we resume, we
 8 have to re-configure the camera to allow it to
 9 pick up both Mr. Pike and Mr. Andrews who will
 10 both be available to be the person who best
 11 answers the various questions that may come
 12 from the individual parties.
 13 COMMISSIONER:
 14 Q. Yes, as a matter of interest, have you
 15 arranged with counsel for the parties for any
 16 order of questioning?
 17 ROIL, Q.C.:
 18 Q. We have developed a protocol and, you know,
 19 indicated to them this was Inquiry counsel's
 20 preference and I think that would be the
 21 protocol we would follow. From time to time
 22 if a party has to leave a room early or needs
 23 to, for some reason or another, get in front
 24 of somebody else, again, we're trying to be
 25 flexible and accommodative here and so we'll

Page 67

1 try to do that where necessary.
 2 COMMISSIONER:
 3 Q. Okay, then thank you, we'll take the break and
 4 it will probably be fifteen minutes anyway
 5 before you can re-configure.
 6 ROIL, Q.C.:
 7 Q. Yes.
 8 COMMISSIONER:
 9 Q. Thank you then, Mr. Pike.
 10 (RECESS)
 11 ROIL, Q.C.:
 12 Q. Thank you, Commissioner. We do have now both
 13 Mr. Pike and Mr. Andrews available and we had,
 14 as we had indicated earlier, developed the
 15 protocol, and so the first opportunity to ask
 16 questions is extended to the legal counsel for
 17 the C-NLOPB. We have the others after that.
 18 I simply remind the parties that they do have
 19 to come up here to this position and ask their
 20 questions from this location.
 21 MS. CROSBIE:
 22 Q. I have no questions at this time.
 23 ROIL, Q.C.:
 24 Q. Okay, I guess you can say you have no
 25 questions from the positions back there and

Page 68

1 indicate that for the record.
 2 REGISTRAR:
 3 Q. Excuse me. Would counsel state their name,
 4 please, whether they have questions or not,
 5 for the record?
 6 ROIL, Q.C.:
 7 Q. Okay. The first one was counsel for the C-
 8 NLOPB. That was Amy Crosbie, and she
 9 indicated that she had no questions. Next is
 10 counsel for Transport Canada.
 11 MR. JOHN ANDREWS AND MR. HOWARD PIKE, CROSS-EXAMINATION
 12 BY MR. JONATHAN TARLTON
 13 MR. TARLTON:
 14 Q. Good morning, Commissioner. My name is
 15 Jonathan Tarlton. I do have a couple of very
 16 brief questions. Yes, thank you again. I
 17 understand I should reintroduce myself for the
 18 purposes of the general public, Commissioner.
 19 My name is Jonathan Tarlton. I am a lawyer
 20 with the Department of Justice and
 21 representing Transport Canada in this matter.
 22 Good morning, gentlemen. Thank you very much
 23 for your testimony over the past couple of
 24 days. I just have a couple of brief questions
 25 to ask, largely in respect of Mr. Pike's

Page 69

1 testimony earlier this morning. Mr. Pike, you
 2 indicated in response to some questions from
 3 Mr. Roil that the Board became aware of some
 4 notifications as a result of some incidents
 5 involving helicopters. Do you recall saying
 6 that?
 7 MR. PIKE:
 8 A. With reference to the incident reporting, yes.
 9 MR. TARLTON:
 10 Q. Yes, and can I just by way of clarify, when
 11 you use the word "incidents" are you using the
 12 word "incidents" as understood in Exhibit 48
 13 and specifically the definition in Section 6
 14 and the further clarification in Section 8.4?
 15 MR. PIKE:
 16 A. Could you repeat that? I'm not sure. You're
 17 referring to?
 18 MR. TARLTON:
 19 Q. Well, you referred this morning as well to the
 20 guidelines and Exhibit 48, the guidelines for
 21 the reporting and investigation of incidents.
 22 MR. PIKE:
 23 A. Yes, I did.
 24 MR. TARLTON:
 25 Q. And you explained that in some detail, and I

Page 70

1 understand in both Section 6 and Section 8.4
 2 of those guidelines, there's a specific
 3 definition of incident.
 4 MR. PIKE:
 5 A. Yes, that's correct.
 6 MR. TARLTON:
 7 Q. And I just want to clarify when you referred
 8 in response to Mr. Roil's questions about
 9 receiving notification of some incidents from
 10 other parties, you used that, you used the
 11 word "incident" as well.
 12 MR. PIKE:
 13 A. The reporting we would have received would
 14 have been from the operator, and they may have
 15 been related to helicopter operations. So the
 16 incident we would have had reported would have
 17 been from the operator. We would not have
 18 received an incident report from other
 19 parties.
 20 MR. TARLTON:
 21 Q. Thank you for that clarification, because I
 22 think you've helped answer the questions that
 23 I wanted to get at next, which are in regards
 24 to the safety plan. Both you and Mr. Andrews,
 25 in your testimony, mentioned the importance of

Page 71

1 the safety plans and the need to have them
 2 approved before authorizations go forward. Is
 3 that correct?
 4 MR. PIKE:
 5 A. That's correct.
 6 MR. TARLTON:
 7 Q. Is it part of the approval of the plan to
 8 require an operator to notify the Board of any
 9 incident that they--information of any
 10 incident they receive, whether it comes
 11 through the Board's processes or it comes
 12 through information received by other sources?
 13 MR. PIKE:
 14 A. Yes.
 15 MR. TARLTON:
 16 Q. Okay. That would include, for example, the
 17 helicopter operator with which an oil operator
 18 would secure to provide transportation for
 19 workers to and from St. John's and the oil
 20 rigs, correct?
 21 MR. PIKE:
 22 A. Yes.
 23 MR. TARLTON:
 24 Q. And that would also--could include information
 25 that the oil operator received from their

Page 72

1 helicopter operator from other entities or
 2 regulators, correct?
 3 MR. PIKE:
 4 A. Yes.
 5 MR. TARLTON:
 6 Q. Okay, thank you. Those are all my questions.
 7 Thank you, Mr. Commissioner.
 8 ROIL, Q.C.:
 9 Q. Next in the order is the counsel for the
 10 Canadian Association of Petroleum Producers.
 11 Counsel is not here, but Mr. Paul Barnes is
 12 here.
 13 MR. BARNES:
 14 Q. That's correct, and I'm the manager of
 15 Atlantic Canada for CAPP. I'm actually going
 16 to be the witness for CAPP, and we have no
 17 questions for C-NLOPB.
 18 ROIL, Q.C.:
 19 Q. Mr. Barnes indicates that he's the manager of
 20 CAPP and that there will be no questions from
 21 CAPP of these witnesses. Next we have the
 22 three oil operator companies, and we've
 23 allowed them to make the decision as to which
 24 one of those would lead on any particular
 25 item, so I would call upon one of them to come

Page 73

1 forward. Ms. Cecily Strickland is legal
 2 counsel for Hibernia Management and
 3 Development Corporation.
 4 STRICKLAND, Q.C.:
 5 Q. Good morning, Commissioner Wells. We have no
 6 questions at this time, but will reserve any
 7 questions that we do have to the point when
 8 the C-NLOPB puts forward substantive evidence
 9 with respect to the audits and assessments
 10 that they have done.
 11 COMMISSIONER:
 12 Q. Okay, thank you.
 13 MACDONALD, Q.C.:
 14 Q. Commissioner, Alexander MacDonald for Husky.
 15 We will not be asking questions and we make
 16 the same observations as Ms. Strickland just
 17 made.
 18 COMMISSIONER:
 19 Q. Okay, thank you.
 20 ROIL, Q.C.:
 21 Q. For the record, Sandy MacDonald, legal counsel
 22 for Husky has indicated that they do not have
 23 any questions at this time and reserve the
 24 same rights as were reserved by counsel for
 25 HMDC.

Page 74

1 MR. MAHONEY:
 2 Q. Good morning, Mr. Commissioner. Denis Mahoney
 3 on behalf of Suncor Energy and we have no
 4 questions for these witnesses at this time.
 5 Thank you.
 6 COMMISSIONER:
 7 Q. Thank you.
 8 ROIL, Q.C.:
 9 Q. Denis Mahoney, legal counsel for Suncor
 10 Energy, indicates that they have no questions
 11 at this time as well. Next would be Norman
 12 Whalen, legal counsel for Cougar Helicopters.
 13 WHALEN, Q.C.:
 14 Q. Good morning, Mr. Commissioner. I have no
 15 questions at this time, but of course, reserve
 16 the right to questioning on the evidence that
 17 may come forward after Christmas from the C-
 18 NLOPB.
 19 COMMISSIONER:
 20 Q. Thank you.
 21 ROIL, Q.C.:
 22 Q. Mr. Whalen also indicates that he has no
 23 questions at this time. Next is the
 24 opportunity for legal counsel for Sikorsky
 25 Helicopters. Their legal counsel is not

Page 75

1 present today. Next would be representatives
 2 of Helly Hansen and I don't believe that there
 3 is any representative of Helly Hansen who is
 4 available today. The next would be legal
 5 counsel for Memorial University, as operator
 6 of the Offshore Survival Centre.
 7 MS. HOLLETT:
 8 Q. Thank you, Mr. Commissioner. We have no
 9 questions at this time.
 10 ROIL, Q.C.:
 11 Q. Commissioner, Karen Hollett, legal counsel for
 12 the University indicates that they have no
 13 questions at this time for these witnesses.
 14 Counsel for the Government of Newfoundland and
 15 Labrador, Mr. Rolf Harris is here.
 16 MR. PRITCHARD:
 17 Q. Good morning.
 18 ROIL, Q.C.:
 19 Q. Rolf Harris, I'm sorry. Rolf Pritchard. My
 20 first mistake, but not the last time I'll do
 21 something like that.
 22 MR. PRITCHARD:
 23 Q. My comments usually aren't as comedic. Mr.
 24 Commissioner, thank you very much. I don't
 25 have any questions on behalf of the Province

Page 76

1 of Newfoundland and Labrador. Gentlemen,
 2 thank you for your evidence.
 3 COMMISSIONER:
 4 Q. Okay, thank you.
 5 ROIL, Q.C.:
 6 Q. Mr. Pritchard indicates that he has no
 7 questions on behalf of the Government of
 8 Newfoundland. Mr. Jack Harris has limited
 9 standing and could be present, but he is not
 10 present today. Counsel for CEP.
 11 MR. BALAKRISHNAN:
 12 Q. Good morning, Mr. Commissioner. Raman
 13 Balakrishnan appearing on behalf of CEP. We
 14 have a few questions. I don't know, do you
 15 need me to spell my name?
 16 COMMISSIONER:
 17 Q. I'm sorry?
 18 MR. BALAKRISHNAN:
 19 Q. Do you need me to spell my name?
 20 COMMISSIONER:
 21 Q. Probably, yes, to be on the safe side.
 22 MR. BALAKRISHNAN:
 23 Q. Okay. It's R-A-M-A-N B-A-L-A-K-R-I-S-H-N-A-N.
 24 Hopefully everybody got that.
 25 COMMISSIONER:

Page 77

1 Q. Okay, thank you.
 2 MR. JOHN ANDREWS AND MR. HOWARD PIKE, CROSS-EXAMINATION
 3 BY MR. RAMAN BALAKRISHNAN
 4 MR. BALAKRISHNAN:
 5 Q. Most of my questions are going to be--I think
 6 Mr. Pike is going to be in the better position
 7 to answer these. Mr. Pike, the audits and
 8 inspections that occur, I think you mentioned
 9 this morning that they generally occur on a
 10 three-month schedule basis?
 11 MR. PIKE:
 12 A. Yes, that's correct.
 13 MR. BALAKRISHNAN:
 14 Q. Are there any spot checks? Would there be any
 15 reason why C-NLOPB would send somebody earlier
 16 than three months, later than three months?
 17 MR. PIKE:
 18 A. That is certainly possible if an incident came
 19 to our attention that we would want to
 20 investigate sooner than that or to inquire
 21 into, sorry, yes, there could be a possibility
 22 of more frequent inspections.
 23 WHALEN, Q.C.:
 24 Q. The witness will have to speak up, Mr.
 25 Commissioner.

Page 78

1 COMMISSIONER:
 2 Q. Difficulty hearing?
 3 UNKNOWN SPEAKER:
 4 Q. Yes, it is back here.
 5 COMMISSIONER:
 6 Q. If you could both speak probably a bit louder.
 7 MR. BALAKRISHNAN:
 8 Q. Okay. The reason why you would need maybe
 9 more frequent inspections or anything like
 10 that, if that ever popped up, would that
 11 generally run from the minutes that are being
 12 provided to C-NLOPB from the committees?
 13 MR. PIKE:
 14 A. We've certainly had case to do that, where
 15 there was an issue related to joint
 16 occupational health and safety committee. We
 17 did do a focused inspection at that point,
 18 dealing with that issues. In addition, if
 19 there was an incident reported that we felt
 20 required immediate follow up, we may do,
 21 again, an inspection related to an incident.
 22 So either of those could result in an
 23 inspection, other than the three-monthly
 24 schedule.
 25 MR. BALAKRISHNAN:

Page 79

1 Q. Now with the draft regulations, which I
 2 understand from your testimony yesterday,
 3 that's incorporated in--that's actually a
 4 condition into the authorization? Is that
 5 correct?
 6 MR. PIKE:
 7 A. Yes.
 8 MR. BALAKRISHNAN:
 9 Q. Okay. So those are expected to be followed
 10 and adhered to?
 11 MR. PIKE:
 12 A. Yes.
 13 MR. BALAKRISHNAN:
 14 Q. If there are any violations of any of the
 15 occupational health and safety draft
 16 regulations, you mentioned that an
 17 authorization could be removed?
 18 MR. PIKE:
 19 A. Yes.
 20 MR. BALAKRISHNAN:
 21 Q. Or the offender could be prosecuted, I would
 22 think?
 23 MR. PIKE:
 24 A. Yes.
 25 MR. BALAKRISHNAN:

Page 80

1 Q. Any other penalties available? A fine, you
 2 know, anything at all?
 3 MR. PIKE:
 4 A. No.
 5 MR. BALAKRISHNAN:
 6 Q. Okay. So it's either Court or a complete
 7 shutdown?
 8 MR. PIKE:
 9 A. Yes. We would--well, I think there is a
 10 notice to comply would be--there is a
 11 progressive scale to this.
 12 MR. BALAKRISHNAN:
 13 Q. Oh, I'm going to go to that.
 14 MR. PIKE:
 15 A. It would not be a fine.
 16 MR. BALAKRISHNAN:
 17 Q. No.
 18 MR. PIKE:
 19 A. But you would progress your way through it.
 20 But once you reach the stage of more legal
 21 proceedings, it would be removal of the
 22 authorization or Court. But there is a
 23 progression to get to that stage.
 24 MR. BALAKRISHNAN:
 25 Q. Well, why don't we go through that? I operate

Page 81

1 ABC Company Inc. that's running a drilling
 2 platform and it appears that I'm in violation
 3 of one of the requirements under the draft
 4 occupational health and safety regs.
 5 MR. PIKE:
 6 A. If this came to light in an audit or
 7 inspection, it would be raised as an
 8 observation or a finding. We would then
 9 anticipate that that would be corrected. If
 10 you, as an operator, were failing to meet that
 11 and it was found that it continued, we could
 12 then raise it to a notice to comply. If you
 13 continued not to meet that part, there would
 14 be an order for compliance and if you
 15 continued not to comply with that piece, then
 16 we would look at prosecution or removal of the
 17 authorization, depending on the nature of the
 18 violation. A significant violation, we would
 19 probably look at removal of the authorization
 20 first. Otherwise, we would look at a
 21 prosecution, prosecution taking a longer time
 22 than the removal of the authorization.
 23 MR. BALAKRISHNAN:
 24 Q. If I recall correctly, I think your testimony
 25 yesterday, you mentioned that you've never

Page 82

1 actually had a prosecution, if I'm recalling
 2 correctly on that.
 3 MR. PIKE:
 4 A. I did state that yesterday, and it would be
 5 none related to occupational health and safety
 6 regulation, yes.
 7 MR. BALAKRISHNAN:
 8 Q. Okay.
 9 MR. PIKE:
 10 A. There have been two prosecutions for safety
 11 issues, but they were not related to the
 12 occupational health and safety regulation.
 13 MR. BALAKRISHNAN:
 14 Q. What would those have been related to?
 15 MR. PIKE:
 16 A. They were related to diving operations and
 17 they were against divers falsifying
 18 documentation.
 19 MR. BALAKRISHNAN:
 20 Q. So the observation that--the observation or
 21 the finding and then the follow up, do you
 22 have a particular time line that you give the
 23 operator to try and meet the compliance?
 24 MR. PIKE:
 25 A. Yes. Once we raise the observation or the

Page 83

1 finding, they're given a specific period of
 2 time to respond, indicating what action they
 3 plan to take against an observation or
 4 finding.
 5 MR. BALAKRISHNAN:
 6 Q. And what is that generally?
 7 MR. PIKE:
 8 A. Generally two weeks.
 9 MR. BALAKRISHNAN:
 10 Q. Two weeks.
 11 MR. PIKE:
 12 A. That may not be that they've actually done it,
 13 but they would have to indicate what their
 14 plan is in place. If it requires a particular
 15 piece of equipment that needs to be ordered,
 16 that may take some time. So that would be
 17 noted in their response.
 18 MR. BALAKRISHNAN:
 19 Q. And if that doesn't work, the notice to
 20 comply, do you have a time frame that you give
 21 them to try to comply at that point?
 22 MR. PIKE:
 23 A. There would be specified in that a time to
 24 respond, yes.
 25 MR. BALAKRISHNAN:

Page 84

1 Q. And generally, how long would that be? It
 2 would depend on the nature I would think.
 3 MR. PIKE:
 4 A. Yes, it would be an ad-hoc determination.
 5 MR. BALAKRISHNAN:
 6 Q. Okay. The meetings that occur on shore, you
 7 mentioned this morning that you're trying to
 8 coordinate two meetings. I know it's supposed
 9 to be one, but it's turned out to be two with
 10 the shift workers.
 11 MR. PIKE:
 12 A. Yes.
 13 MR. BALAKRISHNAN:
 14 Q. Who attends those meetings?
 15 MR. PIKE:
 16 A. It would be members of the Joint Occupational
 17 Health and Safety Committee for an
 18 installation.
 19 MR. BALAKRISHNAN:
 20 Q. Okay. So it would be employees and -
 21 MR. PIKE:
 22 A. The employer representatives, management
 23 representatives.
 24 MR. BALAKRISHNAN:
 25 Q. Other than those meetings, does the C-NLOPB

Page 85

1 oversee the joint committees in any way,
 2 ensure that maybe its guidelines and its
 3 interpretation policies are being adhered to,
 4 anything like that?
 5 MR. PIKE:
 6 A. When we are on an installation, we would
 7 review the committee's operation and we would
 8 meet with the worker representatives of the
 9 committee. And again, with the minutes, we
 10 would ensure that the minutes are meeting the
 11 standards that are required for joint
 12 occupational health and safety committees.
 13 Some of that is outlined in the legislation.
 14 Some of it would be standards as set by the
 15 Workers Compensation Board.
 16 STRICKLAND, Q.C.:
 17 Q. Commissioner Wells, could the witness please
 18 either speak into the microphone or speak
 19 (inaudible).
 20 MR. PIKE:
 21 A. My apologies.
 22 MR. BALAKRISHNAN:
 23 Q. The minutes that you receive from the joint
 24 committee, you mentioned that they're expected
 25 to meet every three weeks and the minutes are

Page 86

1 sent to you?
 2 MR. PIKE:
 3 A. That's correct.
 4 MR. BALAKRISHNAN:
 5 Q. Is the C-NLOPB's position that that's a strict
 6 timeline, every three weeks? Are you
 7 expecting minutes every three weeks?
 8 MR. PIKE:
 9 A. The legislation makes reference to once every
 10 three months. Our expectation is every three
 11 weeks, essentially once during the rotation
 12 that the committee would meet. I would tend
 13 to say we strongly encourage that these
 14 committees meet on a regular basis, and I
 15 can't over emphasize the strongly encourage.
 16 MR. BALAKRISHNAN:
 17 Q. What happens with the minutes when they come
 18 in? I mean, do they go to a specific safety
 19 officer? Do they go to your attention? Just
 20 run us through that.
 21 MR. PIKE:
 22 A. The process we currently have in place at the
 23 Board is a safety officer is assigned to an
 24 installation. So when the minutes come in,
 25 that safety officer would look at the minutes.

Page 87

1 In addition to that, we have a safety officer
 2 assigned to managing the minutes from joint
 3 occupational health and safety committees. He
 4 would also review the meeting, the minutes.
 5 So they're essentially reviewed by two people
 6 in my office. Should they see anything
 7 untowards in those minutes, they would raise
 8 them with me. I don't personally read all the
 9 minutes, but if there is an issue that they
 10 believe needs to be raised, they will raise it
 11 with me.
 12 MR. BALAKRISHNAN:
 13 Q. What happens with the minutes afterwards? Are
 14 they entered into -
 15 MR. PIKE:
 16 A. They're filed.
 17 MR. BALAKRISHNAN:
 18 Q. Are they--would they be reviewed on a periodic
 19 basis or an annual basis or once they're
 20 filed, is that it?
 21 MR. PIKE:
 22 A. As I indicated, each time the safety officer
 23 prepares for an audit or inspection, he will
 24 refer back to those minutes. Generally that
 25 would only be the minutes between this

Page 88

1 inspection or audit and the last inspection or
 2 audit to see what was there. If there's a
 3 continuing issue that we've seen that was
 4 raised previously, we may go back to those
 5 minutes and track how they've been addressed
 6 through the various minutes.
 7 MR. BALAKRISHNAN:
 8 Q. Would it be the same safety officer who would
 9 be doing the inspection that would also be
 10 reviewing the minutes initially when they come
 11 in?
 12 MR. PIKE:
 13 A. Yes.
 14 MR. BALAKRISHNAN:
 15 Q. Gentlemen, thank you. Commissioner, those are
 16 all my questions for now, but we'd reserve the
 17 right to ask questions later on.
 18 COMMISSIONER:
 19 Q. Yes, okay, thank you.
 20 ROIL, Q.C.:
 21 Q. Mr. Commissioner, the next position in the
 22 asking of questions would be legal counsel to
 23 the families, Jamie Martin.
 24 MR. MARTIN:
 25 Q. Thank you, Mr. Commissioner. We have no

Page 89

1 questions at this time, but we do reserve our
 2 right to perhaps ask questions of the Board at
 3 a later date when further information, we
 4 understand, will be coming out after Christmas
 5 when the operators are giving their evidence,
 6 in particular in relation to the four
 7 complaints that were made in relation to
 8 offshore helicopter safety. You've outlined
 9 them. We would like, to the extent possible,
 10 to have substantive evidence on that point.
 11 You indicated that it would probably come from
 12 the -
 13 ROIL, Q.C.:

14 Q. I think, Mr. Martin, you're going to have to
 15 come up here, and I would also encourage the
 16 witnesses to pretend that the person asking
 17 questions is not as close as they are and to
 18 speak to the back of the room, because I know
 19 the problem is counsel and the witness get
 20 involved in a conversation and people in the
 21 back of the room, I understand, are having
 22 some difficulty. We'll learn as we go.

23 MR. MARTIN:

24 Q. Thank you, Mr. Commissioner. I indicated that
 25 we do reserve our right to ask questions of

Page 90

1 the Board at a later date. We understand that
 2 there very well may be more substantive
 3 evidence being offered by the Board, possibly
 4 after Christmas, and we, in particular,
 5 following on some of the questions that the
 6 Union had, would have specific questions on
 7 the four incidents or complaints, I think you
 8 referred to them as, in relation to helicopter
 9 transportation. So we reserve our right at
 10 that particular time, upon receipt of more
 11 substantive evidence, which we assume will be
 12 forthcoming, and we'll be given an ample
 13 opportunity to review it. So, at this time,
 14 no questions. Thank you.

15 COMMISSIONER:

16 Q. Okay, thank you, Mr. Martin.

17 ROIL, Q.C.:

18 Q. Next would be legal counsel for the Estates of
 19 the flight crew. Ms. Kate O'Brien is here and
 20 will come forward.

21 MR. JOHN ANDREWS AND MR. HOWARD PIKE, CROSS-EXAMINATION
 22 BY MS. KATE O'BRIEN

23 MS. O'BRIEN:

24 Q. Thank you, Commissioner. I just have two what
 25 I think will be fairly brief questions. Mr.

Page 91

1 Pike, earlier when you were speaking today,
 2 you discussed that your safety audits now take
 3 place on a systems basis. You do--you audit
 4 systems when you do those audits?

5 MR. PIKE:

6 A. Yes.

7 MS. O'BRIEN:

8 Q. And I understand that when you're dealing with
 9 helicopter transportation that at any time, on
 10 any inspection, a safety officer may note--
 11 make some observations in relation to
 12 helicopter transport and how those systems are
 13 running. Are there ever any audits that are
 14 targeted specifically towards the helicopter
 15 transportation systems?

16 MR. PIKE:

17 A. Yes.

18 MS. O'BRIEN:

19 Q. And how often would those audits take place on
 20 specifically the helicopter systems audits?

21 MR. PIKE:

22 A. I believe the last dedicated audit we did was
 23 several years ago. So we would not do those
 24 on a regular basis.

25 MS. O'BRIEN:

Page 92

1 Q. So the last one was several years ago. When
 2 would have been the one before that?

3 MR. PIKE:

4 A. We started back in 1997 when Hibernia was
 5 first starting. We would have done an audit
 6 of the helicopter provider at that time. That
 7 would have been included in the safety
 8 assessment and audits that were done at that
 9 time. In the intervening time, off the top, I
 10 can't answer that question.

11 MS. O'BRIEN:

12 Q. Okay.

13 MR. PIKE:

14 A. And we may use that particular audit, it may
 15 have been again a particular operator, but
 16 it's the same service provider, so that audit
 17 would also have counted in other assessments.

18 MS. O'BRIEN:

19 Q. That being Cougar?

20 MR. PIKE:

21 A. Yes.

22 MS. O'BRIEN:

23 Q. Okay. So you're saying since '97, there may
 24 have been only one other audit since, but
 25 there may have been more? You're just not

Page 93

1 sure right now?
 2 MR. PIKE:
 3 A. I'm not sure at this time.
 4 MS. O'BRIEN:
 5 Q. Okay. The other question I have, Mr. Andrews,
 6 relates more particularly, I think, to your
 7 testimony. You had said quite clearly that
 8 the Board, the C-NLOPB, is not responsible for
 9 the safety of workers and you clearly see that
 10 responsibility with the operators.
 11 MR. ANDREWS:
 12 A. Yes.
 13 MS. O'BRIEN:
 14 Q. And I understood your testimony in that
 15 regard, but the question I have is as part of
 16 their application process for authorization,
 17 they submit to you a safety plan?
 18 MR. ANDREWS:
 19 A. Yes.
 20 MS. O'BRIEN:
 21 Q. Okay, and you assess that safety plan and
 22 that's one of the things that have to be to
 23 your satisfaction before you actually issue
 24 the authorization?
 25 MR. ANDREWS:

Page 94

1 A. Yes.
 2 MS. O'BRIEN:
 3 Q. Okay. So if there was an issue with a
 4 deficiency in the plan itself, so if a worker
 5 safety incident arose and it wasn't because
 6 the operator wasn't following the plan, say
 7 they were following the plan exactly as it had
 8 been set out, but it was ultimately found that
 9 there was some deficiency in the plan itself,
 10 would the C-NLOPB bear some of the
 11 responsibility then?
 12 MR. ANDREWS:
 13 A. The responsibility of the operator, of our
 14 role as a regulator, is to verify--to oversee
 15 and to verify to the plan that has been
 16 approved. Obviously when a safety plan is
 17 provided to the regulator, we would conduct an
 18 assessment and a review and hopefully would be
 19 able to have observed any deficiencies that
 20 were in the plan. But I would have to say, as
 21 the lawyer, that our role is to oversee the
 22 implementation of that plan and to verify that
 23 it remains in play and observed by the
 24 operator, even if, in fact, there is a
 25 deficiency in that plan that has continued.

Page 95

1 MS. O'BRIEN:
 2 Q. Do you see yourselves as being responsible for
 3 assuring the plans themselves are not
 4 deficient?
 5 MR. ANDREWS:
 6 A. That is clearly the role of the operations and
 7 safety department in conducting their review
 8 and assessments to ensure that there are no
 9 gaps or deficiencies in the safety plan.
 10 MS. O'BRIEN:
 11 Q. Okay. Thank you very much. Those are all my
 12 questions.
 13 MR. PIKE:
 14 A. If I could give one clarification, I'd just
 15 referred to my notes. In actual fact, since
 16 2000, we had four specific inspections or
 17 audits at the Cougar facilities. They would
 18 have incorporated as part of other audits.
 19 MS. O'BRIEN:
 20 Q. Sorry, since? I missed the year.
 21 MR. PIKE:
 22 A. 2000. Four of the 261 audits or inspections I
 23 referred to would have included an inspection
 24 or audit of the Cougar facilities.
 25 MS. O'BRIEN:

Page 96

1 Q. Would those have been safety audits or
 2 security audits or both?
 3 MR. PIKE:
 4 A. They would have been only security--sorry,
 5 safety audits.
 6 MS. O'BRIEN:
 7 Q. Those are specific safety audits, okay. Thank
 8 you very much.
 9 MR. PIKE:
 10 A. I believe there were three security audits.
 11 MS. O'BRIEN:
 12 Q. As well?
 13 MR. PIKE:
 14 A. Yes.
 15 MS. O'BRIEN:
 16 Q. Thank you.
 17 COMMISSIONER:
 18 Q. Okay, thank you.
 19 ROIL, Q.C.:
 20 Q. Commissioner, in the protocol developed, we
 21 now have a final opportunity for counsel for
 22 the party being examined, which is in this
 23 case, the C-NLOPB. So once again, in this
 24 case, Ms. Crosbie has an opportunity to ask
 25 questions.

Page 97

1 MS. CROSBIE:
 2 Q. I have no questions.
 3 MR. JOHN ANDREWS AND MR. HOWARD PIKE, RE-EXAMINATION BY
 4 JOHN ROIL, Q.C.
 5 ROIL, Q.C.:
 6 Q. And she indicates that she has no questions.
 7 The final is for Inquiry counsel itself to ask
 8 questions and I have a couple that have
 9 arisen, I guess, in terms of notes between Ms.
 10 Fagan and I and not necessarily as a result of
 11 arising out of anything that was being asked
 12 by the others, and because we're not into a
 13 strictly courtroom protocol, I'll take this
 14 opportunity to ask a couple of questions. For
 15 Mr. Pike, the first question is, you had said
 16 in your direct evidence about--you made
 17 mention of the requirement for Transport
 18 Canada to be alerted to aviation near misses
 19 or aviation incidents, aviation occurrences.
 20 I'll try to not use the word "incidents"
 21 because it gets defined in some of your
 22 regulations, but incidents, in other words
 23 that, for example, a helicopter would be
 24 flying too close to another helicopter, which
 25 I think is defined as a near miss. Does that

Page 98

1 get reported to the C-NLOPB as well? I think
 2 is the question that I have for you, or do you
 3 rely on being notified for Transport Canada?
 4 Is there an opportunity for a gap there or is
 5 that a tight process?
 6 MR. PIKE:
 7 A. We would not be notified by Transport Canada
 8 of incidents reported directly to Transport
 9 Canada.
 10 ROIL, Q.C.:
 11 Q. So incidents that are reported--and again,
 12 you're speaking to me casually, rather than
 13 speaking to the room.
 14 MR. PIKE:
 15 A. Sorry.
 16 ROIL, Q.C.:
 17 Q. Incidents that are reported to Transport
 18 Canada as a result of their regulatory regime
 19 do not necessarily get reported to you? Is
 20 that the answer?
 21 MR. PIKE:
 22 A. Yes.
 23 ROIL, Q.C.:
 24 Q. Okay, and do you see this as a deficit or is
 25 there an opportunity for improvement there, in

Page 99

1 terms of would there be any value to C-NLOPB
 2 also being made aware of that reporting?
 3 MR. PIKE:
 4 A. We've certainly become aware since March of a
 5 database that is on the website of Transport
 6 Canada Aviation which does list, I think it's
 7 referred to as the CADORS database. That's
 8 something we've more recently become aware of
 9 and we are beginning to refer to that to check
 10 incidents that have been reported to Transport
 11 Canada against incidents.
 12 ROIL, Q.C.:
 13 Q. Okay. Could you define or sorry, spell that
 14 word for the database?
 15 MR. PIKE:
 16 A. I think it's an acronym and it's C-A-D-O-R-S
 17 ROIL, Q.C.:
 18 Q. CADORS.
 19 MR. PIKE:
 20 A. Yes, and I think that refers to--the aviation
 21 industry is wonderful for acronyms. I'm sure
 22 it refers to some sort of reporting system
 23 that Transport Canada has.
 24 ROIL, Q.C.:
 25 Q. Well, we will have Transport Canada here and

Page 100

1 they can explain in more detail. So you have
 2 access to that database?
 3 MR. PIKE:
 4 A. My understanding is it is available on their
 5 website and we have referred to it and noted
 6 that there are a number of incidents they have
 7 on their database that we do not have, and
 8 that would not necessarily have triggered an
 9 incident report in our case, but would have
 10 under the Transport Canada system.
 11 ROIL, Q.C.:
 12 Q. Under your current protocols, is it a part of
 13 your regular diligence now that you do monitor
 14 that website?
 15 MR. PIKE:
 16 A. We would from time to time check that website,
 17 yes.
 18 ROIL, Q.C.:
 19 Q. There was mention made in your direct evidence
 20 of security as it goes--as you go out to the
 21 heliport, there's an understanding that there
 22 is a scanning process. I don't know that you
 23 use the word "scan" but it is my understanding
 24 that there is a scanning process when one gets
 25 on the helicopter, much like you would have in

Page 101

1 an airport, a metal detecting and that kind of
 2 thing. Is that correct?
 3 MR. PIKE:
 4 A. Yes, both the individuals and luggage.
 5 Luggage is x-rayed and individuals would go
 6 through a scanner, yes.
 7 ROIL, Q.C.:
 8 Q. Okay. Is there a similar scan on board the
 9 installations for when a worker gets back on
 10 board and is returning to his or her home?
 11 MR. PIKE:
 12 A. Not to my knowledge.
 13 ROIL, Q.C.:
 14 Q. What is the purpose of the scan, from your
 15 understanding?
 16 MR. PIKE:
 17 A. It would be to detect things that are not
 18 supposed to be brought out to the
 19 installation.
 20 ROIL, Q.C.:
 21 Q. Okay. Would it be advantageous, from the
 22 perspective of the C-NLOPB, for there to be a
 23 scan of individuals after they leave the
 24 installation and come to shore?
 25 MR. PIKE:

Page 102

1 A. That's something we have never considered in
 2 the past, but it is certainly an interesting
 3 question that we will follow up with. It's
 4 not something that's commonly done. A lot of
 5 our protocols are utilized in the North Sea.
 6 Certainly the North Sea workers are scanned on
 7 their way out, but to my knowledge, they're
 8 not scanned on the way back in. So it would
 9 be a different protocol. It's an interesting
 10 question but not something that we had turned
 11 our minds to.
 12 ROIL, Q.C.:
 13 Q. Okay, and another question that is somewhat
 14 related to the issue of workers going out and
 15 returning. We do know that before a worker
 16 goes out, he or she has the opportunity to
 17 rest at home and that they are presumably not
 18 in any degree of tiredness or distress as they
 19 leave. What about when workers are returning?
 20 Is there an opportunity for a rest time before
 21 workers are boarding an aircraft, a
 22 helicopter, to return at the end of their
 23 three-week shift or is that something that you
 24 would know about?
 25 MR. PIKE:

Page 103

1 A. I don't have detailed knowledge of that. My
 2 understanding is that that may not be the
 3 case. It depends on what shift the individual
 4 worker is working. So if they had been on
 5 nights and it was their time to get off, they
 6 may have had some opportunity to do that and
 7 they may not. I'm not--I don't have detailed
 8 knowledge of that.
 9 ROIL, Q.C.:
 10 Q. Okay. So the ability to have a rest before one
 11 boards the aircraft to return might depend on
 12 the timing of the arrival of the helicopter,
 13 which might be subject to weather, and it
 14 might be dependent upon the time that the
 15 worker finished his last shift?
 16 MR. PIKE:
 17 A. Yes, that would be my understanding.
 18 ROIL, Q.C.:
 19 Q. Commissioner, those are all the questions that
 20 are from the participants and the parties of
 21 standing and from Inquiry counsel. I suspect
 22 that you may have some yourself.
 23 COMMISSIONER:
 24 Q. I just have one or two, thank you. Mr. Pike,
 25 you're probably the most appropriate person to

Page 104

1 direct the question to. You've spoken of the
 2 safety officers, you know, who make visits to
 3 the rigs. Are they all--is there always a
 4 safety officer on the installations, each of
 5 the installations, or how much time do they
 6 spend on the installations?
 7 MR. PIKE:
 8 A. We do not have a safety officer on board an
 9 installation at all times, no. As I
 10 indicated, we make audits or inspections.
 11 Normally we will be out every three months.
 12 That would be our normal rotation. That may
 13 vary, depending on circumstances.
 14 COMMISSIONER:
 15 Q. And the length of the stay of the safety
 16 officer to observe everything and talk to
 17 people and that sort of thing?
 18 MR. PIKE:
 19 A. That will vary depending on the focus of the
 20 inspection. It could be as little as two
 21 days. It could be five days, or longer if
 22 necessary.
 23 COMMISSIONER:
 24 Q. I see, okay.
 25 MR. PIKE:

Page 105

1 A. But generally, they would be in the range of
 2 two to five days.
 3 COMMISSIONER:
 4 Q. I see. I should imagine that when a safety
 5 officer is on an installation, aside from the
 6 formal reporting mechanisms and meetings and
 7 all that, there would be a fairly constant
 8 discussion of possible -
 9 MR. PIKE:
 10 A. Yes.
 11 COMMISSIONER:
 12 Q. - improvements and whatever might occur to the
 13 safety officer and to the people on the
 14 installation. Is that so?
 15 MR. PIKE:
 16 A. Yes, that would be the case.
 17 COMMISSIONER:
 18 Q. Are these valuable exchanges?
 19 MR. PIKE:
 20 A. My understanding from my safety officers is
 21 yes, they are.
 22 COMMISSIONER:
 23 Q. I see. Okay then, thank you. That's all the
 24 questions I have. Thank you both for being
 25 here.

Page 106

1 ROIL, Q.C.:
 2 Q. Okay, Commissioner, that is the last of the
 3 evidence from the C-NLOPB. We have a couple
 4 of interesting issues arising. One is, of
 5 course, we had our first scheduling anomaly.
 6 We were not certain when we started the
 7 process how long the questioning would be from
 8 other parties, and I took a day and a bit of
 9 today, and we had anticipated that there would
 10 be more questioning than there was. So we
 11 don't have any other witnesses available for
 12 today or for tomorrow. The next witnesses are
 13 from Transport Canada and they are coming to
 14 Newfoundland on the weekend to be available
 15 for Monday morning, and of course, we don't
 16 have the opportunity to simply change their
 17 schedules and bring them in advance, so we do
 18 have a time now that we, I guess, have to
 19 adjourn. Before we do so, I understand that
 20 there is some documentation that Ms. Fagan and
 21 you have discussed.
 22 COMMISSIONER:
 23 Q. Yes.
 24 ROIL, Q.C.:
 25 Q. With respect to the Department of National

Page 107

1 Defence, and so I would respectfully ask that
 2 you take this opportunity perhaps to deal with
 3 that and these two gentlemen can go back and
 4 sit in their regular places.
 5 COMMISSIONER:
 6 Q. Yes. Yes, Ms. Fagan?
 7 MS. FAGAN:
 8 Q. Commissioner, as noted in your opening
 9 remarks, you had indicated that you had
 10 received statements from the Department of
 11 National Defence with respect to their role in
 12 search and rescue and that you would provide
 13 those statements within a couple of days. We
 14 have those statements. They have been marked
 15 as proposed exhibit 50 and proposed exhibit
 16 51. The statements have been provided to the
 17 counsel for the parties with standing through
 18 our Filebridge system, and we would like to
 19 have those two exhibits formally entered and
 20 marked. Once they are entered and marked,
 21 they will be available on the website of the
 22 Inquiry for the public to review and as well,
 23 we've made copies for the media. So if it's
 24 acceptable, I'd like to have Exhibit 50 and
 25 51, which are the statements from the

Page 108

1 Department of National Defence with respect to
 2 their role in search and rescue.
 3 COMMISSIONER:
 4 Q. Okay, thank you very much. So you will enter
 5 these now then as Exhibits and they would go
 6 on the website approximately when?
 7 REGISTRAR:
 8 Q. Shortly.
 9 COMMISSIONER:
 10 Q. Very shortly, okay then, that's done. Thank
 11 you.
 12 MS. FAGAN:
 13 Q. Thank you. That should be the evidence now
 14 for this week and unless you have something
 15 else to add?
 16 COMMISSIONER:
 17 Q. I don't know if anybody has anything else to
 18 raise maybe on a practical matter or
 19 logistical matter, vis-a-vis the hearings. If
 20 there is anything anyone wanted to raise, now
 21 would be a good time to do it. Is there
 22 anything? No. All right then, we'll adjourn
 23 and be back on Monday morning.
 24 ADJOURNED TO MONDAY, OCTOBER 26, 2009 AT 9:30 A.M.

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 21st 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 21st day of October, 2009

11 Cindy Sooley
12 Discoveries Unlimited Inc.
13 Judy Moss
14 Discoveries Unlimited Inc.

<p style="text-align: center;">-&-</p> <p>& [2] 55:10,17</p> <hr/> <p style="text-align: center;">-?-</p> <p>'88 [1] 65:1 '97 [1] 92:23</p> <hr/> <p style="text-align: center;">-1-</p> <p>11 [1] 47:12 12-hour [3] 14:8 21:9 22:3 12th [3] 34:23 43:10 47:8 14 [2] 9:19,20 15th [1] 16:25 16 [1] 21:7 170 [1] 18:22 178 [1] 50:25 1987 [1] 64:22 1997 [3] 50:12,14 92:4 1998 [1] 19:20 1st [2] 29:16,18</p> <hr/> <p style="text-align: center;">-2-</p> <p>2000 [2] 95:16,22 2001 [1] 47:12 2005 [1] 18:21 2006 [3] 46:12,12,14 2009 [6] 1:1 29:16 43:10 108:24 109:4,10 21 [6] 1:1 14:9,10 21:10 23:4 24:18 21-day [5] 14:8 21:9 24:14 37:7 38:3 213 [1] 109:5 21st [2] 109:4,10 24 [2] 9:14 35:9 24-hour [1] 9:16 24-hour-a-day [1] 3:8 24-hour-day [1] 34:13 25 [1] 44:9 26 [1] 108:24 261 [3] 50:23 52:18 95:22 26th [1] 44:12 28 [1] 23:23</p> <hr/> <p style="text-align: center;">-3-</p> <p>30 [3] 11:7,9 46:15 31 [1] 109:5 365-day-a-year [1] 34:14</p> <hr/> <p style="text-align: center;">-4-</p> <p>4000 [2] 50:24 52:15 45 [1] 2:4 48 [5] 29:2,8,8 69:12,20</p> <hr/> <p style="text-align: center;">-5-</p>	<p>50 [2] 107:15,24 50's [1] 62:4 51 [2] 107:16,25 52-weeks-of-the-year [1] 9:17 57 [3] 52:10,15,19</p> <hr/> <p style="text-align: center;">-6-</p> <p>6 [2] 69:13 70:1</p> <hr/> <p style="text-align: center;">-7-</p> <p>7-day-a [1] 9:16</p> <hr/> <p style="text-align: center;">-8-</p> <p>8.4 [2] 69:14 70:1 80s [1] 44:18</p> <hr/> <p style="text-align: center;">-9-</p> <p>911 [2] 47:11 57:22 9:30 [1] 108:24</p> <hr/> <p style="text-align: center;">-A-</p> <p>A.M [1] 108:24 ABC [1] 81:1 Aberdeen [2] 64:16,18 ability [4] 22:7 61:13 103:10 109:7 able [13] 2:16 15:5 17:5 22:23 25:11 32:8 34:12 36:2 37:8 56:2 57:14 63:6 94:19 abnormal [2] 7:6 8:11 abnormality [1] 8:18 acceptable [1] 107:24 accepted [1] 32:12 access [3] 58:10,17 100:2 accidents [1] 10:21 accommodations [2] 13:3,4 accommodative [1] 66:25 accompany [1] 55:12 account [2] 35:11,14 achieved [2] 5:19,21 acronym [1] 99:16 acronyms [1] 99:21 action [1] 83:2 actions [1] 45:13 active [1] 58:19 activities [1] 7:5 activity [3] 7:13 48:18 60:17 actual [5] 39:1 65:12,12 65:13 95:15 ad-hoc [1] 84:4 adapted [1] 44:22 add [1] 108:15 addition [7] 12:4 13:22 30:6 31:22 53:15 78:18 87:1</p>	<p>addressed [2] 25:20 88:5 addresser [1] 16:18 addressing [1] 10:17 Adequate [1] 4:16 adhered [2] 79:10 85:3 Adherence [1] 60:16 adjourn [2] 106:19 108:22 ADJOURNED [1] 108:24 advance [1] 106:17 advanced [1] 18:6 advantageous [1] 101:21 Adverse [2] 33:24 38:25 Affairs [1] 45:18 afford [1] 55:18 afterwards [1] 87:13 again [27] 5:2,22 13:11 15:12 16:3 17:25 18:2 19:7,25 22:9 29:8 32:7 32:20,22 35:5 37:24 38:23 44:5 48:21 54:8 66:24 68:16 78:21 85:9 92:15 96:23 98:11 against [8] 45:1 51:1 52:12,23 53:21 82:17 83:3 99:11 agents [1] 32:24 ago [6] 36:2 56:24 57:12 65:8 91:23 92:1 agreement [1] 20:14 Aid [1] 37:17 aids [3] 17:9,9 37:16 aircraft [6] 4:14,18,22 39:6 102:21 103:11 airframe [1] 43:15 airframes [1] 44:2 airport [1] 101:1 alcohol [1] 22:9 alerted [1] 97:18 Alexander [1] 73:14 align [1] 44:22 allow [3] 57:10 64:24 66:8 allowed [1] 72:23 allows [6] 17:16 56:6,7 56:17,19 57:14 along [2] 65:11,22 Alpha [2] 64:21 65:1 alternate [1] 14:24 always [3] 14:17 23:8 104:3 amount [1] 23:1 ample [1] 90:12 Amputation [1] 36:19 Amy [1] 68:8 analysis [2] 57:15 63:18 Andrews [14] 40:5 66:9 67:13 68:11 70:24 77:2 90:21 93:5,11,18,25 94:12 95:5 97:3</p>	<p>announcements [1] 52:6 annual [6] 13:22 15:4 27:5 35:22,25 87:19 anomaly [1] 106:5 answer [5] 64:5 70:22 77:7 92:10 98:20 answers [2] 64:2 66:11 anticipate [1] 81:9 anticipated [1] 106:9 anxious [1] 23:5 anyway [2] 66:7 67:4 apologies [1] 85:21 apparatus [1] 109:8 appearing [1] 76:13 Appendix [3] 2:11,25 4:6 application [2] 21:14 93:16 applications [1] 21:17 approach [2] 60:23 63:17 appropriate [3] 19:9 65:16 103:25 appropriately [2] 48:15 48:17 approval [1] 71:7 approved [4] 60:13,18 71:2 94:16 area [4] 18:16 40:1 42:13 55:6 areas [2] 19:15 55:4 arisen [1] 97:9 arising [3] 57:21 97:11 106:4 arose [1] 94:5 arranged [1] 66:15 arrival [2] 55:1 103:12 arrive [1] 49:12 arrived [1] 7:12 ashore [2] 14:12,14 aside [1] 105:5 aspect [1] 59:19 assess [4] 5:18 13:20 59:12 93:21 assessed [1] 60:15 assessment [7] 6:15,17 6:25 45:1,3 92:8 94:18 assessments [5] 5:17 17:15 73:9 92:17 95:8 assigned [2] 86:23 87:2 assist [1] 63:22 associated [1] 12:12 Association [1] 72:10 assume [1] 90:11 assuring [1] 95:3 Atlantic [1] 72:15 atomic [1] 62:9 attends [1] 84:14 attention [4] 18:16 61:5 77:19 86:19</p>	<p>audit [47] 16:12 44:16 44:25 45:1,2,8 46:6 47:15,15,20 48:9 53:3,5 53:8,14,15,19,21 54:1,3 54:7,20 55:3,13,22 56:12 56:15,18 58:6,16,22 59:4 59:10,18,23 60:8 81:6 87:23 88:1,2 91:3,22 92:5,14,16,24 95:24 auditing [2] 44:20,20 audits [29] 45:6,8 46:3,9 47:10 50:23 52:18 53:18 56:19 57:22 59:15 65:12 73:9 77:7 91:2,4,13,19 91:20 92:8 95:17,18,22 96:1,2,5,7,10 104:10 Australia [1] 19:19 authorities [2] 30:24 62:9 authorization [16] 4:2 6:18,24 47:17,21 60:13 60:15,19 79:4,17 80:22 81:17,19,22 93:16,24 authorizations [3] 47:19 60:25 71:2 available [10] 3:14 18:17 66:10 67:13 75:4 80:1 100:4 106:11,14 107:21 availed [1] 62:18 aviation [11] 41:4,5,8 41:10 43:24 44:6 97:18 97:19,19 99:6,20 aware [7] 31:7 41:13 43:11 69:3 99:2,4,8 away [1] 25:1</p> <hr/> <p style="text-align: center;">-B-</p> <p>B-A-L-A-K-R-I-S-H-N-A-N [1] 76:23 back-p [1] 34:11 Balakrishnan [36] 76:11,13,18,22 77:3,4 77:13 78:7,25 79:8,13 79:20,25 80:5,12,16,24 81:23 82:7,13,19 83:5,9 83:18,25 84:5,13,19,24 85:22 86:4,16 87:12,17 88:7,14 Banks [1] 3:6 Barnes [3] 72:11,13,19 base [2] 4:23 58:12 based [3] 11:2 33:2,15 basic [1] 35:16 basis [17] 3:8 7:4,22,25 8:17 12:24 13:21 16:24 34:14 35:22,25 77:10 86:14 87:19,19 91:3,24 bear [1] 94:10 became [2] 41:13 69:3 become [3] 57:23 99:4,8 becomes [2] 31:7 36:9 beforehand [2] 63:15 63:15 began [2] 45:3,6 beginning [2] 50:14 99:9</p>
--	---	---	---	--

<p>behalf [4] 74:3 75:25 76:7,13 behave [1] 32:13 best [3] 15:8 66:10 109:7 better [8] 18:23 36:22 41:23 44:22 56:7 63:10 63:23 77:6 between [7] 33:23 37:16 45:8 46:9 54:1 87:25 97:9 bit [19] 1:16 2:16 4:21 9:4 9:5,12,23 10:8,24 21:1 25:7 34:1 40:15 45:14 47:13 48:7 55:23 78:6 106:8 board [36] 12:2,18,19 20:10,11,15,16 21:15,16 21:19,22 23:11 30:1 39:7 39:18,19 40:2,7,11 43:11 44:18 47:1 49:8 55:25 56:4 69:3 71:8 85:15 86:23 89:2 90:1,3 93:8 101:8,10 104:8 Board's [2] 43:16 71:11 boarding [1] 102:21 boards [3] 39:8,25 103:11 boats [1] 4:24 book [1] 18:13 bottom [1] 44:11 brand [1] 29:21 break [3] 13:2 66:7 67:3 brief [3] 68:16,24 90:25 bring [12] 1:22 7:14 13:25 25:6 33:17 37:24 42:2 44:11 49:5 54:18 54:20 106:17 brings [2] 13:23 64:18 broadcast [2] 51:20 52:2 broken [1] 17:7 brought [5] 26:23 27:5 33:15 62:2 101:18 Burns [1] 36:20</p> <hr/> <p style="text-align: center;">-C-</p> <p>C [5] 2:11,25 3:23 68:7 74:17 C-A-D-O-R-S [1] 99:16 C-NLOPB [21] 6:20 7:21 15:13 20:18 22:4 61:14 65:6,20 67:17 72:17 73:8 77:15 78:12 84:25 93:8 94:10 96:23 98:1 99:1 101:22 106:3 C-NLOPB's [1] 86:5 cabin [2] 51:16,20 CADORS [2] 99:7,18 calculation [1] 17:16 calls [1] 34:12 camera [1] 66:8 Canada [25] 4:11 21:18 29:25 33:4 36:7 41:13 41:14 43:23 44:6 62:14 62:18 68:10,21 72:15</p>	<p>97:18 98:3,7,9,18 99:6 99:11,23,25 100:10 106:13 Canada's [2] 41:19 57:22 Canadian [3] 10:12 33:3 72:10 cannot [1] 63:4 capable [2] 4:19,23 CAPP [4] 72:15,16,20 72:21 capture [2] 15:6 41:10 captured [1] 42:20 carried [1] 57:9 carry [1] 34:10 case [13] 8:6 12:1,3 19:10 19:14 20:13 39:25 78:14 96:23,24 100:9 103:3 105:16 cases [4] 8:11 18:20 20:15 42:23 casually [1] 98:12 Cecily [1] 73:1 cell [1] 34:10 centre [4] 33:1 62:21 63:21 75:6 CEP [2] 76:10,13 certain [2] 62:2 106:6 certainly [8] 18:10 25:14 63:5 77:18 78:14 99:4 102:2,6 CERTIFICATE [1] 109:1 certified [1] 4:11 certify [1] 109:2 challenges [2] 14:23 15:1 chances [1] 5:23 change [2] 55:23 106:16 changed [1] 51:15 check [2] 99:9 100:16 checked [1] 53:11 checking [1] 54:5 checks [2] 38:1 77:14 Chernobyl [1] 62:10 Christmas [3] 74:17 89:4 90:4 Cindy [1] 109:11 circumstances [2] 9:21 104:13 city [5] 18:21,23 19:14 19:22 32:5 clarification [4] 1:12 69:14 70:21 95:14 clarify [5] 1:10 11:13,16 69:10 70:7 classifications [1] 35:18 clear [6] 1:14 6:9 23:24 31:23 56:9 62:14 clearer [1] 5:4 clearly [7] 1:16 2:18 18:19 51:17 93:7,9 95:6 close [6] 2:15 23:18 61:8</p>	<p>65:4 89:17 97:24 closed [6] 22:21,22 56:19 56:22 57:1,3 closely [1] 64:21 closer [2] 8:19 45:17 closing [2] 55:19 60:12 CN [1] 62:21 Coastguard [1] 33:3 collected [2] 16:23 36:8 collective [1] 20:13 collision [1] 33:12 collisions [1] 38:15 combined [1] 30:6 comedic [1] 75:23 comfortable [1] 24:22 coming [2] 89:4 106:13 comment [2] 64:7,13 comments [2] 65:7 75:23 Commissioner [59] 1:2 1:6 22:19 60:21 61:4,11 64:8 65:4 66:13 67:2,8 67:12 68:14,18 72:7 73:5 73:11,14,18 74:2,6,14 74:19 75:8,11,24 76:3 76:12,16,20,25 77:25 78:1,5 85:17 88:15,18 88:21,25 89:24 90:15,24 96:17,20 103:19,23 104:14,23 105:3,11,17 105:22 106:2,22 107:5,8 108:3,9,16 commitments [1] 53:16 committee [26] 7:17 11:1,10 13:5,8,15,15 14:16,18,21 15:19 25:15 25:24 26:6,15 32:17,18 53:10 55:10,17 56:14 78:16 84:17 85:9,24 86:12 committee's [1] 85:7 committees [18] 8:25 10:10,11,14,22,23 13:18 13:19,24 15:14,16 25:8 26:24 78:12 85:1,12 86:14 87:3 common [1] 17:23 commonly [1] 102:4 communication [1] 4:23 companies [2] 12:15 72:22 company [2] 65:24 81:1 compare [2] 36:3,7 comparison [1] 41:15 comparisons [1] 36:9 Compensation [1] 85:15 competent [1] 19:10 complaints [7] 46:11,13 46:15,17 53:12 89:7 90:7 complete [4] 17:5 45:4 65:6 80:6 completed [2] 6:25 49:3</p>	<p>completion [2] 12:16 59:9 completions [1] 12:14 compliance [9] 44:14 44:15 46:4 47:23 54:4 54:11 58:24 81:14 82:23 comply [5] 80:10 81:12 81:15 83:20,21 component [2] 19:12 40:19 comprehensive [2] 46:6 53:18 concern [7] 15:8 24:11 24:15 46:22 47:5 48:19 54:24 concerned [1] 47:3 concerns [9] 23:6 25:17 25:18 26:22 46:18 54:19 54:20 55:19,21 conclusion [2] 50:9 52:10 condition [3] 22:9 39:15 79:4 conditions [4] 8:12 33:25 38:25 39:2 conduct [3] 44:24 46:20 94:17 conducting [3] 45:6 46:3 95:7 conducts [1] 55:2 conference [2] 24:6 64:11 confine [1] 43:14 conformance [1] 16:15 conformances [1] 59:16 considered [5] 37:11,12 37:21 58:3 102:1 consisting [1] 46:4 constant [1] 105:7 constantly [1] 19:5 constituencies [2] 13:1 13:1 constitute [1] 50:5 construction [1] 23:22 containers [1] 40:22 context [3] 41:4,5,8 contingency [1] 2:25 continue [2] 46:8 47:23 continued [4] 81:11,13 81:15 94:25 continuing [2] 57:13 88:3 contract [1] 12:4 contracted [3] 5:14,16 44:18 contractor [3] 6:2 11:25 12:12 contractors [5] 11:16 12:20 58:7,8,14 contrast [1] 10:25 control [7] 2:8 29:11 33:13 38:15,16 44:19 48:12</p>	<p>conversation [1] 89:20 coordinate [1] 84:8 coordination [2] 3:17 32:25 copies [1] 107:23 copy [1] 21:24 core [1] 25:2 Corporation [1] 73:3 correct [12] 39:23 70:5 71:3,5,20 72:2,14 77:12 79:5 86:3 101:2 109:3 corrected [2] 60:19 81:9 corrective [1] 45:13 correctly [3] 49:3 81:24 82:2 corroboration [1] 45:18 Cougar [9] 26:4 32:20 46:20,23 58:18 74:12 92:19 95:17,24 counsel [25] 66:15 67:16 68:3,7,10 72:9,11 73:2 73:21,24 74:9,12,24,25 75:5,11,14 76:10 88:22 89:19 90:18 96:21 97:7 103:21 107:17 counsel's [1] 66:19 count [1] 37:14 counted [3] 38:5,7 92:17 countries [1] 62:15 couple [9] 29:24 45:22 68:15,23,24 97:8,14 106:3 107:13 course [3] 74:15 106:5 106:15 Court [2] 80:6,22 courtroom [1] 97:13 cover [1] 14:1 create [2] 22:25 61:15 crew [1] 90:19 crews [2] 3:16 4:12 critical [1] 40:17 Crosbie [4] 67:21 68:8 96:24 97:1 CROSS-EXAMINATION [3] 68:11 77:2 90:21 culture [21] 31:13 32:3,7 32:9 58:21 61:10,12,15 61:22 62:8,11,16,17,18 62:23 63:1,4,4,7 64:2,16 current [3] 6:5 8:5 100:12 curve [1] 42:12 cycle [2] 14:7 45:4</p> <hr/> <p style="text-align: center;">-D-</p> <p>daily [8] 7:2,4,5,20,22 7:25 8:6,17 Damage [2] 34:2 40:16 data [2] 8:19 17:16 database [9] 17:14 41:14 56:15 57:10 99:5,7,14 100:2,7 date [4] 29:15 64:24 89:3</p>
---	--	---	--	--

<p>90:1 Dated [1] 109:9 day-of-rest [2] 21:11,14 day-to-day [1] 13:21 days [25] 8:13 9:19,21 14:9,10 17:11,11 21:10 21:13 23:4,12,13,23 24:15,18,20 34:10 37:5 56:6 59:3 68:24 104:21 104:21 105:2 107:13 deal [7] 12:16 26:8,11 65:10,12,21 107:2 dealing [5] 6:14 39:20 62:16 78:18 91:8 deals [2] 2:11,25 dealt [3] 9:2 57:3,5 decision [2] 65:8 72:23 deck [1] 59:7 dedicated [2] 3:7 91:22 Defence [3] 107:1,11 108:1 deficiencies [2] 94:19 95:9 deficiency [3] 94:4,9,25 deficient [1] 95:4 deficit [1] 98:24 define [5] 28:5 31:11 32:11 38:14 99:13 defined [4] 40:5 47:10 97:21,25 definition [8] 19:8 36:22 38:17 40:24 41:7,23 69:13 70:3 definitions [4] 31:2 36:5 36:11,19 degree [1] 102:18 demonstrated [1] 58:20 Denis [2] 74:2,9 department [8] 45:19 46:10,16 68:20 95:7 106:25 107:10 108:1 departure [1] 55:20 depend [2] 84:2 103:11 dependent [3] 13:16 48:1 103:14 depending [3] 81:17 104:13,19 deployment [2] 3:11,13 depressurizing [1] 39:13 depth [1] 43:21 describe [1] 54:12 design [1] 4:19 designed [1] 39:6 desire [2] 36:2 58:20 detail [2] 69:25 100:1 detailed [2] 103:1,7 details [2] 8:9 66:3 detect [1] 101:17 detecting [1] 101:1 determination [1] 84:4 determine [1] 17:20</p>	<p>develop [5] 3:17 18:4 44:20 61:22 63:3 developed [4] 36:11 66:18 67:14 96:20 developing [2] 57:19 63:23 Development [1] 73:3 Deviations [1] 60:17 devices [2] 40:22,23 difference [2] 53:25 54:1 different [14] 11:7,10 23:16,25 24:1,3,4 26:17 35:25 36:4,5,6,12 102:9 differently [1] 36:8 difficult [3] 32:10 36:10 45:4 difficulty [2] 78:2 89:22 diligence [1] 100:13 direct [5] 22:13 65:5 97:16 100:19 104:1 directions [1] 8:14 directly [1] 98:8 disaster [1] 64:21 Discharge [1] 38:23 Discoveries [2] 109:12 109:14 discreet [1] 27:19 discrimination [1] 31:17 discuss [1] 27:21 discussed [5] 15:7 26:3 47:14 91:2 106:21 discussing [1] 5:2 discussion [4] 24:6 36:15 62:25 105:8 discussions [1] 24:16 dispensing [1] 49:13 disposition [1] 46:13 distance [1] 62:3 distinguishing [2] 33:22 37:16 distress [1] 102:18 divers [1] 82:17 diving [1] 82:16 doctorial [1] 64:17 document [4] 29:10 30:8 30:9 42:4 documentation [2] 82:18 106:20 documented [1] 46:14 doesn't [1] 83:19 done [17] 7:1 18:14,15 24:9 29:24 55:7 62:20 62:22 63:13,14 64:15 73:10 83:12 92:5,8 102:4 108:10 down [5] 3:1 4:8 17:7 34:23 65:23 down-manning [1] 39:11 draft [4] 22:5 79:1,15 81:3 drilling [13] 1:19 4:24</p>	<p>8:7,10 11:24,25 12:1,10 12:11 13:10,11 22:1 81:1 drills [1] 4:18 drugs [1] 22:9 due [2] 36:24 39:14 during [8] 7:13 15:4 17:6 49:21 55:14,22 59:16 86:11 duties [3] 17:6 37:4,10 duty [6] 9:15 33:7 34:5,9 34:25 59:21</p> <hr/> <p style="text-align: center;">-E-</p> <hr/> <p>E [1] 4:6 e-mail [2] 35:11,14 ear [1] 52:1 early [2] 1:8 66:22 easiest [1] 54:12 easily [1] 54:19 effective [1] 11:9 effectively [3] 3:18 12:23 16:6 effectiveness [1] 13:16 effects [1] 39:4 Eight [1] 19:21 either [9] 11:10 22:14 38:11 44:2 51:3 61:14 78:22 80:6 85:18 elected [1] 12:25 electrical [1] 19:24 element [1] 45:11 elements [4] 10:15 45:1 45:3 57:24 elevator [1] 40:22 emergency [4] 33:5,21 39:7,9 emphasize [1] 86:15 employee [5] 11:9 13:7 22:6 31:7,8 employee's [1] 22:7 employees [9] 12:3,18 13:3 26:8,11 31:5,10,21 84:20 employer [4] 11:1 12:21 31:9 84:22 employers [5] 11:7,10 11:14 12:17 31:15 enables [1] 17:20 encourage [7] 13:18 24:23 31:13 63:6 86:13 86:15 89:15 encourages [1] 10:16 end [2] 38:2 102:22 ended [2] 1:7 6:13 energy [3] 57:23 74:3,10 enforcement [1] 44:14 engaged [3] 62:24 63:18 63:20 engineering [1] 62:1 engines [1] 44:2 ensure [8] 3:16 16:5 31:10,12,19 85:2,10 95:8</p>	<p>enter [1] 108:4 entered [3] 87:14 107:19 107:20 entertainment [2] 51:10 52:4 entire [1] 25:10 entirely [1] 61:8 entities [2] 10:18 72:1 enviable [1] 20:1 environment [2] 59:2 62:4 environmental [12] 30:7,9,12 33:25 38:19 38:24,25 39:2,15 45:18 46:4 58:24 environments [1] 4:16 equipment [8] 3:10,13 19:9,13 40:17,21 62:2 83:15 equipped [1] 3:9 essential [1] 53:25 essentially [5] 33:15 50:17 62:11 86:11 87:5 established [3] 33:19 35:10 46:10 establishment [1] 10:13 Estates [1] 90:18 evacuation [1] 33:9 evaluating [1] 5:20 event [2] 5:7 19:25 events [2] 42:17 43:10 everybody [2] 24:21 76:24 evidence [17] 1:6 6:13 11:15 23:24 46:22 65:5 73:8 74:16 76:2 89:5,10 90:3,11 97:16 100:19 106:3 108:13 evolution [1] 61:25 evolved [1] 44:17 evolving [1] 46:7 exactly [1] 94:7 examined [1] 96:22 example [4] 11:20 49:5 71:16 97:23 examples [2] 34:21 65:11 Excellence [1] 18:13 except [2] 58:11 65:10 exception [1] 27:18 excess [1] 39:4 exchanges [1] 105:18 excluding [1] 43:10 Excuse [1] 68:3 Exemutive [1] 24:9 exemption [2] 21:11,13 exhibit [6] 2:2 69:12,20 107:15,15,24 exhibited [1] 58:18 exhibits [2] 107:19 108:5 expect [1] 34:17 expectation [4] 3:22,23</p>	<p>43:1 86:10 expected [6] 3:6 5:10 16:17 38:7 79:9 85:24 expecting [1] 86:7 experience [4] 4:14,15 43:16 64:18 expertise [1] 32:19 explain [3] 1:16 6:19 100:1 explained [1] 69:25 explanation [2] 5:5 61:9 explosion [5] 18:20 19:20 32:5 33:12 38:15 exposure [2] 17:2 20:9 expression [4] 14:5 30:11 39:17 41:3 extended [1] 67:16 extensive [5] 28:7,17 38:17 41:22 64:15 extent [1] 89:9 extra [1] 22:24 Eyes [1] 36:21</p> <hr/> <p style="text-align: center;">-F-</p> <hr/> <p>fabric [1] 12:5 facilities [5] 58:22 59:1 59:1 95:17,24 facility [4] 19:2 22:21 32:16 34:6 fact [9] 19:2 22:20 48:4 48:10,25 49:2 59:19 94:24 95:15 facts [1] 23:7 Fagan [7] 29:1,5 97:10 106:20 107:6,7 108:12 failing [1] 81:10 failings [1] 19:14 failure [4] 40:17,21 47:1 63:11 fair [1] 66:2 fairly [7] 12:2 28:7 38:17 41:22 62:13 90:25 105:7 falsifying [1] 82:17 familiar [1] 28:15 families [1] 88:23 fatalities [1] 28:18 fatality [2] 33:8 36:16 fateful [1] 61:2 fatigue [3] 22:8,10 24:8 feature [1] 47:11 felt [3] 66:2,4 78:19 few [2] 45:15 76:14 fifteen [2] 18:21 67:4 file [3] 8:4,6 35:12 Filebridge [1] 107:18 filed [5] 7:3 9:10 16:25 87:16,20 fill [1] 35:8 filled [3] 8:9 48:15,16 final [3] 56:11 96:21 97:7 finding [9] 48:22 50:7,7</p>
---	---	---	--	--

<p>51:12 55:8 81:8 82:21 83:1,4 findings [5] 52:10,12,15 52:19 53:5 fine [2] 80:1,15 finish [2] 23:4 45:4 finished [3] 6:23 42:3 103:15 fire [2] 33:12 38:14 firefighting [2] 40:20 49:25 first [24] 1:15 2:11 3:20 4:13,17 5:3,9,22 6:1 7:22 16:18 17:9 37:16,17 61:21 62:8,11 67:15 68:7 75:20 81:20 92:5 97:15 106:5 fitted [1] 43:22 fitting [1] 49:15 five [3] 56:6 104:21 105:2 flags [1] 9:3 flexible [1] 66:25 flight [7] 4:16,21 46:24 49:13,21 51:10 90:19 flights [5] 7:12 46:20 47:3,4,7 flow [1] 39:13 flying [1] 97:24 focus [12] 25:10,11 27:15 37:24 42:14 49:7 58:2 59:14,23 60:8 62:1 104:19 focused [3] 25:24 44:25 78:17 focuses [1] 18:16 focusing [1] 20:6 fog [1] 23:14 folks [3] 23:13,20 62:19 follow [15] 16:11 43:21 43:25 44:7 45:13 46:9 54:7,9 55:5 56:8,10 66:21 78:20 82:21 102:3 follow-up [1] 9:18 followed [1] 79:9 following [6] 4:22 47:8 49:22 90:5 94:6,7 forecast [1] 39:1 foregoing [1] 109:3 foremost [1] 61:21 form [6] 10:2,4 35:8 51:1 57:14 58:15 formal [7] 35:23,24 46:10,13 54:14,16 105:6 formally [3] 32:20 46:15 107:19 forthcoming [1] 90:12 Forty-eight [1] 29:6 forum [1] 35:20 forward [8] 21:24 61:5 63:9 71:2 73:1,8 74:17 90:20 found [4] 36:4 44:21 81:11 94:8</p>	<p>four [5] 46:16 89:6 90:7 95:16,22 frame [1] 83:20 frequent [2] 77:22 78:9 front [3] 29:10 39:19 66:23 full [3] 20:8 24:18 37:4 fulltime [1] 58:25 fully [1] 32:10 function [2] 13:6 22:7 functions [1] 7:9</p> <hr/> <p style="text-align: center;">-G-</p> <hr/> <p>gap [1] 98:4 gaps [1] 95:9 gas [4] 19:19,21,24 20:1 gateways [2] 58:12,13 gear [1] 40:23 general [2] 54:22 68:18 generally [10] 17:22 42:11 54:9 77:9 78:11 83:6,8 84:1 87:24 105:1 generate [1] 50:7 generated [1] 52:19 generating [1] 50:24 generation [1] 19:24 gentlemen [5] 1:3 68:22 76:1 88:15 107:3 geophysical [1] 47:18 given [3] 65:11 83:1 90:12 giving [1] 89:5 goes [4] 4:25 41:21 100:20 102:16 good [12] 1:3 13:13 42:11 58:19 68:14,22 73:5 74:2 74:14 75:17 76:12 108:21 governed [1] 22:14 Government [2] 75:14 76:7 governs [1] 20:11 Grand [1] 3:6 great [1] 60:24 greater [2] 5:19 58:2 grounded [1] 44:4 group [5] 12:8 15:2 35:20,23 36:10 groups [1] 14:15 guess [6] 44:12 54:11 64:24 67:24 97:9 106:18 guidance [5] 4:7 28:17 31:22 35:11 36:13 guideline [2] 28:8 39:24 guidelines [8] 1:18,21 3:23 28:5 69:20,20 70:2 85:2</p> <hr/> <p style="text-align: center;">-H-</p> <hr/> <p>half [1] 46:2 Halifax [1] 33:1 hands [1] 48:1</p>	<p>Hansen [2] 75:2,3 happening [7] 8:10,16 9:1 13:20 16:14 26:16 37:25 hardship [1] 31:21 Harris [3] 75:15,19 76:8 hazards [1] 31:18 heading [1] 8:15 headphone [1] 51:24 headsets [2] 51:14 52:1 health [35] 7:17 8:24 10:9,10,12,18,22 13:23 15:13 17:20 22:5 24:8 25:8,14,23,24 26:6,24 27:6 31:18 42:14 46:11 53:10 55:10,17 62:21 63:21 78:16 79:15 81:4 82:5,12 84:17 85:12 87:3 hear [1] 2:22 heard [2] 51:17 109:4 hearing [2] 78:2 109:4 hearings [1] 108:19 hearts [1] 61:3 held [2] 23:13 55:20 helicopter [59] 1:15 3:2 3:7,9,11,15,16 4:9,12 5:8 5:12 6:3 7:12 22:25 25:12,16,17 26:21 33:11 34:23 37:25 38:11,12,13 43:13,17 44:4 46:17 47:2 47:7 48:4,6 49:6,9 51:1 52:13,23 59:7,13,13,20 61:19 64:11 65:14 70:15 71:17 72:1 89:8 90:8 91:9,12,14,20 92:6 97:23 97:24 100:25 102:22 103:12 helicopters [7] 4:10 5:2 25:19 46:20 69:5 74:12 74:25 helideck [3] 49:24 51:4 60:1 heliport [8] 49:12 51:3 58:11,17 59:5,11,25 100:21 Helly [2] 75:2,3 helped [1] 70:22 hereby [1] 109:2 Hibernia [6] 11:6,19 24:17 50:17 73:2 92:4 high [2] 65:9 66:3 highlight [1] 7:6 hindsight [1] 20:2 hit [1] 34:1 HMDC [1] 73:25 hold [4] 9:20 13:22 15:5 58:8 Hollett [2] 75:7,11 home [3] 23:5 101:10 102:17 honest [2] 56:1 65:2 hopefully [2] 76:24 94:18 hour [1] 21:7</p>	<p>hours [13] 9:14 17:2,3 17:17 20:10,12,18 21:7 22:11,13 24:7 34:9 35:9 HOWARD [4] 68:11 77:2 90:21 97:3 Husky [2] 73:14,22 hydrocarbon [3] 33:13 38:16,18 hydrocarbons [1] 33:19</p> <hr/> <p style="text-align: center;">-I-</p> <hr/> <p>ice [1] 39:3 icebergs [1] 39:2 idea [2] 32:22 52:5 identified [2] 36:2 51:3 identify [1] 17:21 ignore [2] 18:8 19:12 illness [1] 22:8 illnesses [2] 28:20 37:15 illustrated [1] 18:19 imagine [1] 105:4 immediate [2] 33:24 78:20 immediately [2] 33:7 35:7 impact [1] 60:24 impaired [1] 22:8 impairment [4] 34:2 40:16,17,20 implementation [1] 94:22 implication [1] 50:6 implications [1] 50:11 importance [1] 70:25 important [6] 10:11,14 13:19 18:7 20:4 42:23 impose [1] 63:7 imposed [2] 63:5,7 improve [1] 58:20 improvement [1] 98:25 improvements [1] 105:12 improving [1] 10:21 in-flight [2] 51:6,8 inaudible [1] 85:19 Inc [3] 81:1 109:12,14 incidence [1] 36:7 incident [39] 5:7,10,24 9:19,23 27:21,24 28:3,4 28:6,10 31:8 32:14,25 34:22 35:9,18 38:19,24 40:4,9 43:3,9 47:8,10 53:7 63:13 69:8 70:3,11 70:16,18 71:9,10 77:18 78:19,21 94:5 100:9 incidents [36] 9:13,14 16:12 30:7,11,12,13 31:1 31:11,18 32:8,23 35:5 36:12 41:15,16 43:21,25 44:7 47:12 53:7 69:4,11 69:12,21 70:9 90:7 97:19 97:20,22 98:8,11,17 99:10,11 100:6</p>	<p>include [10] 7:7,10,11 11:24 17:1 30:12 32:15 42:16 71:16,24 included [2] 92:7 95:23 includes [3] 17:10 37:6 59:5 including [2] 4:12 64:1 incomplete [1] 43:7 incorporate [1] 36:13 incorporated [2] 79:3 95:18 increases [1] 5:23 indeed [4] 24:17 60:6 63:9 64:16 independent [4] 45:5 45:17,21 46:1 indicate [2] 68:1 83:13 indicated [17] 1:9 13:12 14:16 15:4 18:11 50:10 64:8 66:19 67:14 68:9 69:2 73:22 87:22 89:11 89:24 104:10 107:9 indicates [6] 72:19 74:10 74:22 75:12 76:6 97:6 indicating [2] 24:1 83:2 indication [1] 17:13 indicator [1] 33:20 indicators [3] 17:22 18:3 18:5 indirect [1] 22:13 individual [5] 17:12 48:21 65:24 66:12 103:3 individuals [5] 49:22 61:18 101:4,5,23 industry [3] 15:1 33:10 99:21 informal [1] 35:23 information [10] 7:7,11 17:14 18:17 35:17 65:5 71:9,12,24 89:3 informative [1] 64:19 infrastructure [1] 57:23 ingrained [1] 32:9 injured [3] 18:22 19:21 37:8 injuries [11] 17:4,4,8 19:11 20:7 28:18,19 36:20,20,21 43:12 injury [20] 16:23 17:13 17:17 18:9,19,24 20:2 33:9 36:18,25 37:1,1,3,5 37:11,12,21,22,25 38:10 input [1] 10:16 inquire [1] 77:20 Inquiry [5] 66:5,19 97:7 103:21 107:22 insight [2] 9:1 60:22 insights [1] 61:13 inspect [3] 47:16,20 55:4 inspected [1] 65:25 inspection [28] 16:11 44:16,17 53:3,6,9,14 54:1,6,18 55:3,13,22 56:12 59:4,10 65:24</p>
--	---	--	---	---

78:17,21,23 81:7 87:23
88:1,1,9 91:10 95:23
104:20
inspections [13] 45:8,12
46:9 48:9 50:23 52:18
65:12 77:8,22 78:9 95:16
95:22 104:10
installation [28] 4:24
5:9 9:2 11:6,19 13:2,24
20:12 21:23 26:4 39:5
40:19 55:1,15,25 56:14
59:8,9,19,24 84:18 85:6
86:24 101:19,24 104:9
105:5,14
installations [11] 10:23
21:8 48:2 57:25 58:9,11
58:13 101:9 104:4,5,6
instead [1] 45:10
Institute [1] 44:19
instructions [2] 49:23
51:16
integrated [2] 46:3
53:17
intended [1] 10:19
interest [6] 21:25 22:4
22:13,16 64:9 66:14
interesting [4] 46:25
102:2,9 106:4
Interestingly [1] 36:14
internal [5] 10:15 15:17
36:20 45:16 46:14
international [5] 8:7
35:19,21 44:19 62:9
interpretation [1] 85:3
intervening [1] 92:9
investigate [3] 9:22 28:3
77:20
investigation [7] 28:4
32:14,15,21 42:22 62:10
69:21
investigations [1] 46:21
investigator [1] 32:19
involve [2] 10:20 18:9
involved [4] 5:24 13:3,6
89:20
involving [4] 5:7 22:25
25:11 69:5
issue [15] 1:11 4:1 6:8
22:10,24 51:3,4,6,8
78:15 87:9 88:3 93:23
94:3 102:14
issued [6] 6:18,24 47:17
47:22 60:14,15
issues [17] 10:18 15:8
16:4,18 20:3 22:25 24:7
25:11,15 26:21 36:1 44:1
44:3 53:12 78:18 82:11
106:4
item [3] 27:19 57:1 72:25
items [5] 53:11 54:23
56:17,20 65:21
itself [4] 20:19 94:4,9
97:7

-J-

Jack [1] 76:8
Jamie [1] 88:23
job [4] 47:25 59:3 60:22
61:1
JOHN [5] 68:11 77:2
90:21 97:3,4
John's [6] 6:6 22:23 33:3
71:19 109:5,9
joint [26] 7:16 8:24 10:9
10:10,13 13:23 15:13
25:7,14,23 26:5,23 27:6
30:8 32:25 39:23 53:9
55:9,17 56:13 78:15
84:16 85:1,11,23 87:2
jointly [1] 29:24
Jonathan [3] 68:12,15
68:19
Judy [1] 109:13
June [1] 29:16
jurisdiction [1] 21:23
jurisdictions [1] 37:11
Justice [1] 68:20

-K-

Karen [1] 75:11
Kate [2] 90:19,22
keep [1] 65:9
kept [1] 17:14
key [4] 28:3 42:21 58:9
58:15
killed [2] 18:22 19:21
kind [6] 11:16 22:24
31:17 34:16 56:20 101:1
knowledge [4] 101:12
102:7 103:1,8

-L-

labour [11] 20:10,11,14
20:16 21:5,15,16,21
22:14,15 23:11
Labrador [5] 21:18
39:21 75:15 76:1 109:6
ladies [1] 1:3
lagging [2] 17:22 18:3
landed [2] 49:24 59:25
landing [2] 4:20 59:7
largely [1] 68:25
last [11] 8:13 37:7 43:14
46:2 53:8 75:20 88:1
91:22 92:1 103:15 106:2
late [1] 44:18
latest [1] 36:13
law [1] 10:12
lawyer [2] 68:19 94:21
lead [3] 32:19 48:21
72:24
leading [1] 18:5
learn [1] 89:22
learned [1] 64:10
learning [1] 42:12
least [1] 4:20
leave [4] 59:8 66:22

101:23 102:19
left [2] 55:24,25
legal [13] 10:19 67:16
73:1,21 74:9,12,24,25
75:4,11 80:20 88:22
90:18
legislation [7] 21:5
31:14 47:24 62:13,15
85:13 86:9
length [2] 22:12 104:15
less [4] 11:9 37:20 54:14
54:16
level [2] 65:9 66:3
licensed [1] 4:12
life [1] 23:7
lifeboats [1] 4:25
lifesaving [1] 40:21
lifting [2] 40:22,23
light [1] 81:6
lights [1] 44:3
likely [1] 47:19
limitation [1] 18:18
limitations [4] 17:24
18:7,11 44:21
limited [1] 76:8
line [1] 82:22
lines [1] 39:13
list [5] 28:7,15,17 41:23
99:6
live [1] 23:8
load [1] 39:4
loads [1] 39:4
location [2] 6:1 67:20
logistical [1] 108:19
logistics [2] 7:8,8
logo [1] 30:3
longer [5] 9:22 23:19
57:9 81:21 104:21
Longford [2] 19:19 20:1
look [26] 8:17,19 14:15
14:18 16:12 21:25 24:24
28:6,8 35:25 41:12 45:9
45:11 47:21 48:13 49:15
57:17 61:5,25 62:5,25
63:2 81:16,19,20 86:25
looked [5] 24:10 49:2
61:23 62:19 64:20
looking [17] 18:4 19:5,7
19:11 22:10 24:2 26:16
33:16 48:11 54:10,11
63:8,9,19,23 64:1 65:23
looks [2] 23:18 58:6
loose [1] 40:23
loss [4] 33:13 36:24 38:16
44:19
lost [8] 17:7,10 18:18
19:10,22 28:19 37:20
61:2
lost-time [3] 18:24 20:1
20:7
louder [2] 2:22 78:6
low-bearing [1] 40:21
luggage [2] 101:4,5

-M-

MacDonald [3] 73:13
73:14,21
Mahoney [3] 74:1,2,9
maintain [1] 3:7
maintained [1] 34:7
maintaining [1] 13:4
maintenance [2] 12:5
13:6
major [7] 28:18 33:8,13
34:2 36:18 37:1 40:16
makes [2] 35:13 86:9
managed [1] 58:5
management [8] 10:17
10:20 18:16,25 62:5,6
73:2 84:22
manager [2] 72:14,19
managing [1] 87:2
mandate [2] 25:2 35:24
March [6] 18:21 34:23
43:10 47:8 61:2 99:4
marine [4] 23:17,20 33:2
33:4
marked [3] 107:14,20
107:20
Martin [5] 88:23,24
89:14,23 90:16
Mary's [2] 62:20 64:17
materials [1] 7:15
matter [4] 66:14 68:21
108:18,19
maximum [2] 21:7 22:3
may [36] 8:17 9:22 12:8
12:18,20 14:19 23:13
24:12 26:5 39:3 41:9
46:21 47:20 48:10 55:4
55:6,19 59:14 66:11
70:14 74:17 78:20 83:12
83:16 88:4 90:2 91:10
92:14,14,23,25 103:2,6
103:7,22 104:12
mean [4] 13:1 43:14
56:22 86:18
meaning [1] 57:3
means [3] 7:2 59:7 109:7
measure [5] 17:23 18:14
33:17 63:10,24
measured [3] 18:14
63:11,15
measurement [1] 50:15
measures [1] 39:10
measuring [2] 17:25
62:25
mechanism [1] 31:12
mechanisms [2] 31:19
105:6
Medevac [1] 33:10
Medevacs [2] 33:12
38:14
media [1] 107:23
medical [5] 17:9 28:20
33:9 37:15,21

meet [10] 35:22,24,25
81:10,13 82:23 85:8,25
86:12,14
meeting [5] 55:2,11,20
85:10 87:4
meetings [7] 15:7 27:6
84:6,8,14,25 105:6
meets [1] 55:15
Melbourne [1] 19:22
members [2] 35:19
84:16
Memorial [2] 63:22 75:5
memos [1] 46:14
mention [2] 97:17
100:19
mentioned [12] 4:10
16:21 34:4 58:23 62:8
62:12 70:25 77:8 79:16
81:25 84:7 85:24
messaging [1] 34:11
metal [1] 101:1
methods [1] 64:1
microphone [3] 2:14,17
85:18
might [7] 11:13 49:6,8
103:11,13,14 105:12
million [1] 17:17
minds [1] 102:11
minor [1] 37:18
minutes [24] 7:16 8:23
15:19 53:9 67:4 78:11
85:9,10,23,25 86:7,17
86:24,25 87:2,4,7,9,13
87:24,25 88:5,6,10
miss [2] 41:3 97:25
missed [1] 95:20
misses [6] 40:24,25,25
42:18 43:12 97:18
missing [3] 28:18 33:8
36:18
mistake [1] 75:20
mode [2] 18:1 23:22
model [2] 12:22 13:12
moderate [1] 4:20
moment [6] 9:4 27:22
31:4 38:25 43:19 47:13
moments [1] 45:15
Monday [3] 106:15
108:23,24
monitor [5] 16:3 20:18
47:23 61:15 100:13
monitoring [3] 7:1 8:15
27:25
month [1] 17:1
monthly [6] 9:10 16:22
16:24 25:8 27:13,20
months [6] 47:18 66:1
77:16,16 86:10 104:11
Montreal [2] 24:5 64:11
morning [15] 1:3,9 68:14
68:22 69:1,19 73:5 74:2
74:14 75:17 76:12 77:9
84:7 106:15 108:23
Moss [1] 109:13

most [4] 17:23 19:23 77:5
103:25
move [4] 2:16,16 6:16
57:21
moved [1] 50:18
Ms [34] 2:1 29:1,5 67:21
73:1,16 75:7 90:19,22
90:23 91:7,18,25 92:11
92:18,22 93:4,13,20 94:2
95:1,10,19,25 96:6,11
96:15,24 97:1,9 106:20
107:6,7 108:12
mud [2] 12:11,13
multi-engine [1] 4:19
multiple [1] 48:20
music [1] 51:11
must [5] 4:10,12,16,22
16:25

-N-

name [6] 7:4 68:3,14,19
76:15,19
National [3] 106:25
107:11 108:1
nature [2] 81:17 84:2
near [8] 40:23,25,25 41:3
42:18 43:12 97:18,25
necessarily [4] 54:10
97:10 98:19 100:8
necessary [6] 3:17 65:16
65:19 66:4 67:1 104:22
need [7] 20:4 21:13 61:22
71:1 76:15,19 78:8
needed [1] 58:5
needs [4] 41:24 66:22
83:15 87:10
neither [1] 20:10
Net [1] 63:20
never [3] 18:19 81:25
102:1
new [9] 14:4 28:4,14,17
29:15,21 33:14 35:10
58:1
newer [1] 61:24
Newfoundland [14]
21:18 23:8 39:20 40:1,1
40:4,6,7 63:20 75:14
76:1,8 106:14 109:6
next [15] 17:6 27:24 37:9
44:12 68:9 70:23 72:9
72:21 74:11,23 75:1,4
88:21 90:18 106:12
nights [4] 24:13,19 59:3
103:5
NL [1] 109:9
NLOPB [3] 3:24 68:8
74:18
Noble [1] 12:1
non [2] 16:14 59:15
non-conformance [4]
50:8 56:16,25 60:1
non-conformances [1]
48:8
none [2] 52:23 82:5

normal [1] 104:12
normally [2] 25:19
104:11
Norman [1] 74:11
norms [1] 32:12
North [5] 12:23 13:13
33:16 102:5,6
Norway [2] 46:1 63:17
norwegian [1] 45:24
note [6] 16:3 47:25 50:4
59:15 63:16 91:10
noted [11] 21:8 42:21,25
49:25 55:21 56:15 60:1
60:2 83:17 100:5 107:8
notes [4] 29:24 43:19
95:15 97:9
notice [3] 80:10 81:12
83:19
notification [7] 33:5,24
34:22 35:13 39:7,9 70:9
notifications [3] 33:22
43:20 69:4
notified [5] 8:18 34:25
39:9 98:3,7
notify [1] 71:8
notifying [1] 35:9
Nova [5] 29:25 35:15
39:20 40:9,11
now [29] 6:8,19,25 15:12
22:19 24:18,23 28:14
29:11 36:8 43:15 51:15
51:15 56:4 57:18 62:7
66:2,3 67:12 79:1 88:16
91:2 93:1 96:21 100:13
106:18 108:5,13,20
number [25] 2:2 8:13
11:14 12:3,8 17:1,3,8,10
17:11 22:11 23:11,12
24:3 29:4,8,8 34:24
36:21 39:12 43:14 60:6
65:7,10 100:6
numbered [1] 44:10

-O-

O'Brien [20] 90:19,22
90:23 91:7,18,25 92:11
92:18,22 93:4,13,20 94:2
95:1,10,19,25 96:6,11
96:15
observation [18] 48:9
48:24,24 49:5,8,16,21
49:24 50:1,4 55:5,8
57:10 81:8 82:20,20,25
83:3
observations [12] 50:10
50:24,25 52:8,11,16 53:4
54:8 55:21 64:10 73:16
91:11
observe [3] 59:12 61:15
104:16
observed [2] 94:19,23
obvious [1] 47:4
obviously [3] 21:12 23:4
94:16
occasion [1] 51:14

occasional [1] 9:21
Occasionally [2] 14:16
14:19
occasions [3] 45:22
58:17 62:24
occupational [33] 7:17
8:24 10:9,10,13 13:23
15:13 22:5 25:7,14,22
25:23 26:6,23 27:6 28:20
36:25 37:15 42:14 53:10
55:9,17 56:13 62:21
63:21 78:16 79:15 81:4
82:5,12 84:16 85:12 87:3
occur [5] 42:18 77:8,9
84:6 105:12
occurred [5] 23:12 34:22
40:9 53:8 63:14
occurrence [2] 31:9 37:3
97:19
occurrences [2] 7:6
97:19
occurs [1] 38:10
October [4] 1:1 108:24
109:4,10
off [16] 1:7 6:23 14:1,10
14:12 17:12 22:24 36:17
37:13 38:12 43:3 48:1
59:8,20 92:9 103:5
offender [1] 79:21
offer [1] 55:11
offered [1] 90:3
office [3] 7:23 9:11 87:6
officer [21] 9:15 34:9
44:16,24 53:4,6 55:2,12
55:15 86:19,23,25 87:1
87:22 88:8 91:10 104:4
104:8,16 105:5,13
officers [8] 45:7 46:5,5
56:2 58:24,24 104:2
105:20
offshore [50] 4:15 5:8,9
7:9,15 8:16 10:22 12:16
14:7 15:6 20:8,12,19
21:8,10,18 23:23 24:13
24:16 26:20 29:25 34:13
35:21 36:1 39:5,12 40:5
40:10,11 44:4 47:4 48:3
48:5 50:18 51:12 54:6
56:10 57:25 58:6,9,10
58:13,15,25 59:3,4 61:16
63:25 75:6 89:8
often [3] 41:4 47:20
91:19
oil [6] 18:21,23 71:17,19
71:25 72:22
once [11] 13:25 23:13
47:21 56:5 80:20 82:25
86:9,11 87:19 96:23
107:20
one [49] 1:10 2:6 10:14
11:8 14:16,18,21 15:2
18:23 20:25 21:16 23:7
24:10 27:22 28:24 29:22
31:4 32:3,10 33:1,18
34:20 41:3 43:5 44:12
44:14,25 45:23 46:24,25
47:18 50:9 52:4,11 58:4
68:7 72:24,25 81:3 84:9
92:1,2,24 93:22 95:14

100:24 103:10,24 106:4
ones [3] 24:10 35:6 51:2
ongoing [2] 61:23 62:17
onshore [3] 11:1 20:9
56:10
onto [1] 38:11
open [3] 29:9 53:12 57:9
opening [4] 22:19 55:2
61:11 107:8
openness [1] 32:7
operate [5] 3:17 10:23
11:15 14:19 80:25
operated [1] 58:14
operating [1] 14:21
operation [4] 3:12 7:10
8:7 85:7
operations [16] 4:9,15
6:3,5 11:24 46:18 48:6
50:19 51:1 52:13,24
59:13,14 70:15 82:16
95:6
operator [29] 7:3 12:21
16:21 25:20 31:9,11
32:16 35:8,11 47:16
56:13 60:20 61:21 63:3
70:14,17 71:8,17,17,25
72:1,22 75:5 81:10 82:23
92:15 94:6,13,24
operator's [4] 47:23
58:7,8,14
operators [19] 3:6 9:20
11:15 16:24 23:15 24:17
24:23 28:2 31:15,19
42:11,12 46:19 58:16
60:12 63:3 65:14 89:5
93:10
opinion [3] 21:17,20
42:10
opportunities [1] 65:19
opportunity [21] 27:14
55:18 59:12 64:7,12
65:15,19,25 67:15 74:24
90:13 96:21,24 97:14
98:4,25 102:16,20 103:6
106:16 107:2
opposed [2] 18:1 51:24
order [3] 66:16 72:9
81:14
ordered [1] 83:15
Organs [1] 36:21
original [3] 51:9 52:3
64:17
Otherwise [1] 81:20
ourselves [1] 16:13
outline [1] 55:2
outlined [2] 85:13 89:8
outstanding [3] 53:4,11
54:8
overall [2] 26:1 45:12
oversee [3] 85:1 94:14
94:21
oversight [1] 58:7
own [2] 11:11 12:19
owner [1] 32:17

-P-

pack [1] 39:2
part [15] 5:17 23:9 25:25
35:19 43:2 55:10 58:15
59:1,3 61:9 71:7 81:13
93:15 95:18 100:12
participants [1] 103:20
particular [17] 12:9
24:22 43:15 44:7 47:5
55:6 56:25 58:22 59:18
72:24 82:22 83:14 89:6
90:4,10 92:14,15
particularly [5] 23:21
42:23 61:17 62:14 93:6
parties [9] 31:16 66:12
66:15 67:18 70:10,19
103:20 106:8 107:17
parts [2] 30:23 40:22
partway [2] 3:1 24:14
party [2] 66:22 96:22
passing [1] 34:4
past [3] 25:16 68:23
102:2
pattern [3] 43:11 57:18
57:19
Paul [1] 72:11
peer [1] 45:24
Peet [1] 109:5
penalties [1] 80:1
people [18] 12:6,8 13:17
14:17,23 18:9,18,22
19:20 23:2,17 60:24 61:1
63:8 87:5 89:20 104:17
105:13
per [3] 17:17 21:6 50:3
perfect [1] 58:18
perform [1] 37:10
performance [2] 37:4
58:19
performed [1] 39:14
perhaps [5] 11:13,16
66:2 89:2 107:2
period [5] 14:9 23:6,19
50:15 83:1
periodic [1] 87:18
permit [6] 48:11,14,15
48:16,18 49:3
permits [2] 48:13,20
person [7] 17:2,5 33:8
37:2 66:10 89:16 103:25
personally [1] 87:8
personnel [6] 3:11 7:11
12:2 19:10,12 39:12
persons [3] 5:24 28:18
36:18
perspective [3] 26:18
26:20 101:22
Peters [1] 18:12
petroleum [5] 21:19
29:25 35:21 40:11 72:10
phone [6] 9:17,18 33:7
34:6,11 35:1

<p>physical [2] 39:1,14 pick [1] 66:9 picked [1] 2:18 picture [3] 17:19 19:1 20:8 piece [16] 5:3 13:10 23:25 24:10 25:25 26:1 27:15 27:18 28:3 33:14 37:18 38:15 56:11 62:13 81:15 83:15 pieces [2] 25:9 41:10 Pike [187] 1:8,11,13,24 2:5,9,10,19,24 3:5,25 4:5 5:11,15 6:4,10,21 7:24 8:3,22 9:9 10:3,7 11:5 11:18,23 14:6,13 15:3 15:15,21 16:2,10,20 19:6 19:18 20:20,24 21:4 23:3 25:3,13 26:2,10,14,25 27:4,10,16 28:1,13 29:12 29:17,23 30:5,14,18,22 31:6 32:2 34:8,19 35:4 38:4,9,22 39:22 40:8,14 41:6 42:5,9 43:18 44:13 45:25 47:9 49:1,11,19 50:16,22 51:7,21,25 52:17,22 53:2 54:2,15 54:21 56:23 57:4,8,20 59:22 60:5,11 61:8,20 64:14,25 65:20 66:9 67:9 67:13 68:11 69:1,7,15 69:22 70:4,12 71:4,13 71:21 72:3 77:2,6,7,11 77:17 78:13 79:6,11,18 79:23 80:3,8,14,18 81:5 82:3,9,15,24 83:7,11,22 84:3,11,15,21 85:5,20 86:2,8,21 87:15,21 88:12 90:21 91:1,5,16,21 92:3 92:13,20 93:2 95:13,21 96:3,9,13 97:3,15 98:6 98:14,21 99:3,15,19 100:3,15 101:3,11,16,25 102:25 103:16,24 104:7 104:18,25 105:9,15,19 Pike's [1] 68:25 pilot [1] 51:17 pilots [2] 4:11 49:23 Piper [2] 64:21 65:1 place [10] 4:1 23:14 31:13,20 32:18 83:14 86:22 91:3,19 109:5 placed [1] 58:2 places [1] 107:4 plan [25] 45:11,12 47:24 53:17,20 54:4 60:13,16 60:18 70:24 71:7 83:3 83:14 93:17,21 94:4,6,7 94:9,15,16,20,22,25 95:9 plans [6] 2:25 45:10 60:14,25 71:1 95:3 plant [3] 19:19 20:1 33:21 platform [4] 11:6 24:17 50:18 81:2 play [2] 10:11 94:23 played [1] 62:7 point [8] 1:8 2:9 20:9</p>	<p>65:22 73:7 78:17 83:21 89:10 pointing [1] 5:3 policies [1] 85:3 popped [1] 78:10 position [4] 67:19 77:6 86:5 88:21 positions [1] 67:25 positive [1] 58:21 possibility [1] 77:21 possible [5] 33:8 42:21 77:18 89:9 105:8 possibly [1] 90:3 post [1] 47:11 potential [2] 9:3 42:24 potentially [2] 48:22 54:22 practical [1] 108:18 practice [2] 4:17 56:4 practices [1] 15:8 prayers [1] 61:4 pre-authorization [1] 47:15 pre-safety [1] 49:20 precautionary [1] 39:10 preference [1] 66:20 preparation [1] 53:20 prepared [2] 16:24 56:5 prepares [1] 87:23 present [5] 1:23 65:17 75:1 76:9,10 presentation [1] 65:9 pressure [3] 46:19,24 56:2 presumably [1] 102:17 pretend [1] 89:16 preventing [1] 18:2 previous [3] 53:5 54:7 56:19 previously [6] 31:24 36:23 47:14 58:4 60:7 88:4 primary [1] 16:17 prime [2] 20:25 34:20 principally [1] 54:3 principle [1] 44:15 priority [2] 57:23 58:3 Pritchard [4] 75:16,19 75:22 76:6 private [1] 55:16 privy [1] 43:5 problem [2] 57:13 89:19 problematic [1] 51:13 problems [8] 9:3 17:21 19:3 24:1 42:25 44:2 48:21 52:7 procedure [2] 54:14,16 procedures [3] 19:9,13 50:3 proceedings [1] 80:21 process [22] 6:15,25 19:3</p>	<p>20:3 33:17,21 35:16 39:8 39:10 44:17 46:7,10,13 47:14 50:2 56:7 86:22 93:16 98:5 100:22,24 106:7 processes [3] 60:25 61:14 71:11 produce [1] 56:3 Producers [1] 72:10 production [3] 12:17 13:8,10 program [1] 58:1 programs [1] 1:19 progress [1] 80:19 progressing [1] 8:14 progression [1] 80:23 progressive [1] 80:11 prohibits [1] 31:14 promoting [1] 63:2 promotion [1] 62:16 proper [1] 19:9 proposed [2] 107:15,15 prosecuted [2] 60:20 79:21 prosecution [4] 81:16 81:21,21 82:1 prosecutions [1] 82:10 protection [3] 20:5 52:2 57:22 protocol [8] 23:14 29:20 66:18,21 67:15 96:20 97:13 102:9 protocols [3] 31:12 100:12 102:5 provide [8] 7:5 12:1 21:19 52:4 59:11 60:21 71:18 107:12 provided [9] 4:17 8:25 21:21 40:24 51:11 56:12 78:12 94:17 107:16 provider [8] 5:12,14,16 5:22 33:11 65:14 92:6 92:16 provides [2] 8:25 17:19 providing [2] 33:11 62:3 province [2] 36:9 75:25 provision [4] 3:14 21:6 21:12,14 provisions [2] 7:15 22:2 proxies [1] 33:18 public [4] 47:1 65:18 68:18 107:22 purpose [5] 15:12,24 30:23 55:3 101:14 purposes [4] 17:16 34:16 66:5 68:18 purview [1] 43:23 put [4] 39:19 45:14 53:15 56:1 puts [1] 73:8 putting [3] 18:14 22:16 46:19 puzzle [1] 25:10</p>	<p style="text-align: center;">-Q-</p> <p>Q.C [141] 1:5,20 2:3,7 2:13,21 3:3,19 4:3 5:6 5:13,25 6:7,12 7:18 8:1 8:20 9:7,25 10:5 11:3,12 11:21 14:3,11,22 15:11 15:18,23 16:7,16 19:4 19:16 20:17,22 21:2 22:18 24:25 25:5,21 26:7 26:12,19 27:2,8,12,23 28:11,23 29:3,7,14,19 30:2,10,16,20 31:3,25 34:3,15 35:2 37:23 38:6 38:20 39:16 40:3,12 41:2 41:25 42:7 43:8 44:8 45:20 47:6 48:23 49:4 49:17 50:13,20 51:5,19 51:23 52:14,20,25 53:22 54:13,17,25 56:21 57:2 57:6,16 59:17 60:3,9 61:7 64:4,23 65:3 66:17 67:6,11,23 68:6 72:8,18 73:4,13,20 74:8,13,21 75:10,18 76:5 77:23 85:16 88:20 89:13 90:17 96:19 97:4,5 98:10,16 98:23 99:12,17,24 100:11 100:18 101:7,13,20 102:12 103:9,18 106:1 106:24 qualify [1] 41:17 quarterly [2] 21:22 23:10 questioning [4] 66:16 74:16 106:7,10 questions [48] 66:11 67:16,20,22,25 68:4,9 68:16,24 69:2 70:8,22 72:6,17,20 73:6,7,15,23 74:4,10,15,23 75:9,13 75:25 76:7,14 77:5 88:16 88:17,22 89:1,2,17,25 90:5,6,14,25 95:12 96:25 97:2,6,8,14 103:19 105:24 quick [1] 20:9 quicker [2] 5:19,21 quickly [1] 28:9 quite [5] 12:22 56:1,9 65:2 93:7 quote [1] 18:12</p> <p style="text-align: center;">-R-</p> <p>R-A-M-A-N [1] 76:23 raise [8] 16:14 55:18 81:12 82:25 87:7,10 108:18,20 raised [11] 16:4,19 24:11 25:15 50:25 51:9 56:25 60:7 81:7 87:10 88:4 Raman [2] 76:12 77:3 range [1] 105:1 rarely [1] 47:21 rate [3] 17:17,18 20:2 rates [2] 18:19,24 rather [4] 24:19 28:16</p>	<p>65:23 98:12 rational [1] 60:23 RCMP [1] 33:4 re-configure [2] 66:8 67:5 RE-EXAMINATION [1] 97:3 reach [1] 80:20 read [2] 3:20 87:8 ready [1] 1:4 realize [1] 3:22 really [1] 22:1 reason [4] 47:22 66:23 77:15 78:8 reasonably [1] 15:10 recalling [1] 82:1 receipt [1] 90:10 receive [12] 7:16,21,22 7:25 8:23 15:25 16:22 32:24 34:12 43:4 71:10 85:23 received [6] 34:21 70:13 70:18 71:12,25 107:10 receives [2] 21:16,22 receiving [3] 49:14 61:5 70:9 recent [2] 31:21 62:13 recently [4] 44:24 53:17 62:7 99:8 RECESS [1] 67:10 recognition [1] 62:6 recommendations [3] 32:4,6 45:16 record [3] 68:1,5 73:21 recorded [1] 38:13 recurring [1] 53:11 reducing [2] 10:20 39:11 reduction [2] 40:19 63:24 refer [10] 1:18 3:1 4:6 7:8 8:8 12:5 43:19 50:5 87:24 99:9 reference [6] 34:5 35:13 38:13 39:24 69:8 86:9 referred [14] 17:22 18:2 22:20 24:11 33:10 61:10 61:12 69:19 70:7 90:8 95:15,23 99:7 100:5 referring [2] 30:24 69:17 refers [2] 99:20,22 Refinery [3] 18:21,23 32:5 regard [8] 1:17 21:20 22:11 23:7 25:16 26:5 55:7 93:15 regards [1] 70:23 regime [1] 98:18 regions [2] 36:4,6 registered [1] 46:16 registrar [4] 29:9 42:2 68:2 108:7 regs [1] 81:4</p>
---	--	--	--	--

<p>regular [7] 37:4,9 46:8 86:14 91:24 100:13 107:4</p> <p>regulated [1] 46:11</p> <p>regulation [2] 82:6,12</p> <p>regulations [10] 8:5 22:2 22:6 30:25 42:15,19,20 79:1,16 97:22</p> <p>regulator [2] 94:14,17</p> <p>regulators [4] 35:20,22 63:11 72:2</p> <p>regulatory [4] 4:7 44:23 62:9 98:18</p> <p>reintroduce [1] 68:17</p> <p>relate [2] 36:15 49:6</p> <p>related [14] 25:18 46:17 46:18,24,25 52:8 70:15 78:15,21 82:5,11,14,16 102:14</p> <p>relates [2] 36:16 93:6</p> <p>relating [1] 36:1</p> <p>relation [4] 89:6,7 90:8 91:11</p> <p>Relations [3] 20:11,14 22:15</p> <p>relatively [2] 28:14 37:17</p> <p>release [3] 33:14,19 38:16</p> <p>releases [1] 38:18</p> <p>relevant [4] 39:7,8,17 39:18</p> <p>relied [2] 43:24 44:6</p> <p>rely [1] 98:3</p> <p>relying [1] 19:1</p> <p>remains [1] 94:23</p> <p>remarks [1] 107:9</p> <p>remember [2] 52:10 61:3</p> <p>remind [1] 67:18</p> <p>removal [4] 80:21 81:16 81:19,22</p> <p>removed [1] 79:17</p> <p>repeat [2] 42:24 69:16</p> <p>replacement [1] 29:21</p> <p>report [28] 9:10,18 16:25 17:8,9 21:22,24 27:14 27:20 31:8,10,14 32:8 32:25 41:20,23 43:3,6 45:5 55:22,24 56:3,5,11 60:2 62:12 70:18 100:9</p> <p>reportable [2] 17:3,17</p> <p>reported [16] 9:13 35:7 36:24 38:8 39:6 40:6,10 41:24 70:16 78:19 98:1 98:8,11,17,19 99:10</p> <p>reporting [26] 6:16 10:1 25:9 27:21,24 30:7,19 31:1,5,11,17,20 33:14 40:2 41:18 42:10,15,17 42:21 43:9 69:8,21 70:13 99:2,22 105:6</p> <p>reports [18] 7:3,20 8:6 8:19 16:22 17:1,18 18:25 23:10,24,25 24:3 25:9 35:12,18 41:22 48:9 53:7</p>	<p>representative [12] 11:11 13:5,9 32:17,21 43:1,2,5 55:9,12,16 75:3</p> <p>representatives [6] 12:25 32:16 75:1 84:22 84:23 85:8</p> <p>represented [1] 13:7</p> <p>representing [1] 68:21</p> <p>requested [1] 21:11</p> <p>require [6] 7:16 8:23 31:1 33:24 60:12 71:8</p> <p>required [17] 6:2 9:13 9:15,19 28:2 32:19 33:6 35:6,17 36:24 40:6 41:19 41:24 59:2 60:18 78:20 85:11</p> <p>requirement [5] 10:19 30:19 42:17,19 97:17</p> <p>requirements [12] 1:17 3:2 4:8 5:1 6:16,20 8:5 10:1 22:4 42:16 44:23 81:3</p> <p>requires [2] 37:19 83:14</p> <p>requiring [3] 22:6 33:21 41:18</p> <p>rescue [8] 3:8,10,16 6:3 32:25 33:2 107:12 108:2</p> <p>research [5] 24:9 61:23 62:17 63:22 64:15</p> <p>researcher [2] 62:22 64:16</p> <p>reserve [7] 73:6,23 74:15 88:16 89:1,25 90:9</p> <p>reserved [1] 73:24</p> <p>resistance [1] 24:20</p> <p>resolved [2] 16:5,8</p> <p>respect [12] 25:7 43:9,13 49:9 61:16,17 65:13 68:25 73:9 106:25 107:11 108:1</p> <p>respectfully [1] 107:1</p> <p>respecting [2] 1:19 57:24</p> <p>respond [3] 18:18 83:2 83:24</p> <p>response [12] 1:15 4:13 4:17 5:3,10,20,21,22 6:1 69:2 70:8 83:17</p> <p>responsibility [4] 10:15 93:10 94:11,13</p> <p>responsible [2] 93:8 95:2</p> <p>rest [5] 21:6 37:6 102:17 102:20 103:10</p> <p>restricted [4] 17:7,11 28:19 36:25</p> <p>result [8] 17:4 22:8 31:20 39:3 69:4 78:22 97:10 98:18</p> <p>resulted [2] 39:3 46:6</p> <p>results [3] 37:1 61:6 65:13</p> <p>resume [1] 66:7</p> <p>resumption [2] 47:2,7</p> <p>return [2] 102:22 103:11</p>	<p>returned [1] 56:5</p> <p>returning [4] 59:10 101:10 102:15,19</p> <p>review [23] 8:12 13:20 42:4 45:5,16,17,21,24 46:1 48:5 53:4,7,16,20 54:4 55:21 59:12 85:7 87:4 90:13 94:18 95:7 107:22</p> <p>reviewed [4] 9:11 53:13 87:5,18</p> <p>reviewing [2] 63:16 88:10</p> <p>revoked [1] 60:20</p> <p>rig [3] 8:10,16 22:21</p> <p>right [9] 14:14 40:13 74:16 88:17 89:2,25 90:9 93:1 108:22</p> <p>rights [1] 73:24</p> <p>rigs [2] 71:20 104:3</p> <p>risk [6] 5:17 22:17 63:17 63:24,24,25</p> <p>risks [2] 5:18 58:5</p> <p>Roil [138] 1:4,5,20 2:3,7 2:13,21 3:3,19 4:3 5:6 5:13,25 6:7,12 7:18 8:1 8:20 9:7,25 10:5 11:3,12 11:21 14:3,11,22 15:11 15:18,23 16:7,16 19:4 19:16 20:17,22 21:2 22:18 24:25 25:5,21 26:7 26:12,19 27:2,8,12,23 28:11,23 29:3,7,14,19 30:2,10,16,20 31:3,25 34:3,15 35:2 37:23 38:6 38:20 39:16 40:3,12 41:2 41:25 42:7 43:8 44:8 45:20 47:6 48:23 49:4 49:17 50:13,20 51:5,19 51:23 52:14,20,25 53:22 54:13,17,25 56:21 57:2 57:6,16 59:17 60:3,9 61:7 64:4,23 65:3 66:17 67:6,11,23 68:6 69:3 72:8,18 73:20 74:8,21 75:10,18 76:5 88:20 89:13 90:17 96:19 97:4 97:5 98:10,16,23 99:12 99:17,24 100:11,18 101:7 101:13,20 102:12 103:9 103:18 106:1,24</p> <p>Roil's [1] 70:8</p> <p>role [7] 10:11 62:7 94:14 94:21 95:6 107:11 108:2</p> <p>Rolf [3] 75:15,19,19</p> <p>room [4] 66:22 89:18,21 98:13</p> <p>root [2] 32:23 42:22</p> <p>rotation [9] 21:9 24:14 24:18,22 37:7 38:3 59:6 86:11 104:12</p> <p>rotations [4] 14:2,4 15:6 24:24</p> <p>rules [2] 41:19,20</p> <p>run [6] 24:18 28:9 40:18 49:20 78:11 86:20</p> <p>running [2] 81:1 91:13</p>	<p style="text-align: center;">-S-</p> <p>safe [2] 19:2 76:21</p> <p>safer [1] 62:3</p> <p>safety [137] 6:25 7:17 8:24 10:9,11,12,14,18 10:22 11:11 13:24 15:14 17:20,24 19:3,8 20:3,8 21:20 22:5 24:9 25:8,10 25:15,23,24 26:6,24 27:6 30:8,12 31:18 32:6 33:4 33:17 35:21 36:1 40:18 40:20 42:15 44:15,16,20 44:24 45:1,2,7,7,10,11 46:5,8,11 47:15,24 48:1 48:8 50:6,11 53:3,6,10 53:16,20 54:4 55:1,10 55:12,15,17 56:2,13 58:23 60:13,14,16,18 61:12,15,24,25 62:1,5,8 62:11,16,17,18,22,23 63:1,4,10,11,20,21 64:2 64:11,15 70:24 71:1 78:16 79:15 81:4 82:5 82:10,12 84:17 85:12 86:18,23,25 87:1,3,22 88:8 89:8 91:2,10 92:7 93:9,17,21 94:5,16 95:7 95:9 96:1,5,7 104:2,4,8 104:15 105:4,13,20</p> <p>Sandy [1] 73:21</p> <p>satisfaction [1] 93:23</p> <p>satisfied [2] 6:8 16:13</p> <p>saw [6] 31:4 46:22 48:20 49:22 56:24 57:11</p> <p>scaffolding [1] 12:7</p> <p>scale [1] 80:11</p> <p>scan [5] 31:4 100:23 101:8,14,23</p> <p>scanned [2] 102:6,8</p> <p>scanner [1] 101:6</p> <p>scanning [2] 100:22,24</p> <p>scenario [1] 49:7</p> <p>schedule [3] 21:21 77:10 78:24</p> <p>schedules [1] 106:17</p> <p>scheduling [1] 106:5</p> <p>scope [1] 30:24</p> <p>Scotia [5] 29:25 35:15 39:20 40:10,11</p> <p>screen [2] 2:8 34:5</p> <p>screens [1] 1:22</p> <p>scrutiny [1] 58:1</p> <p>Sea [5] 12:23 13:13 33:16 102:5,6</p> <p>search [4] 3:8 18:13 107:12 108:2</p> <p>seas [1] 4:20</p> <p>second [1] 28:24</p> <p>Section [5] 39:8 69:13 69:14 70:1,1</p> <p>secure [1] 71:18</p> <p>securing [1] 39:12</p> <p>security [15] 34:2 40:15 47:10 57:21,24 58:3,6,9</p>	<p>58:15,16,18 96:2,4,10 100:20</p> <p>see [25] 6:22 8:13,16 18:10 27:17,19 28:24 30:3 34:4 42:23 43:4 49:14 50:2 54:23 55:6 57:19 59:23 87:6 88:2 93:9 95:2 98:24 104:24 105:4,23</p> <p>seeing [1] 56:17</p> <p>seem [1] 24:4</p> <p>seismic [1] 47:19</p> <p>send [2] 43:6 77:15</p> <p>sent [2] 15:19 86:1</p> <p>separate [1] 25:22</p> <p>September [2] 19:20 47:12</p> <p>series [1] 36:11</p> <p>service [1] 92:16</p> <p>services [2] 12:4,11</p> <p>set [3] 12:24 85:14 94:8</p> <p>seven [2] 21:13 34:10</p> <p>several [7] 36:1 51:8 57:11 58:17 62:24 91:23 92:1</p> <p>severity [1] 17:13</p> <p>shall [4] 31:8,11 39:6,8</p> <p>share [1] 15:8</p> <p>sheet [2] 8:8 30:4</p> <p>sheets [1] 8:12</p> <p>shift [12] 14:25 17:6 21:9 21:20 22:3 24:14 36:17 36:17 84:10 102:23 103:3 103:15</p> <p>shifts [2] 14:24 24:7</p> <p>shore [5] 4:23 56:6,8 84:6 101:24</p> <p>short [1] 28:15</p> <p>short-shift [1] 24:19</p> <p>short-shifting [1] 24:12</p> <p>shortly [2] 108:8,10</p> <p>show [2] 27:20 57:13</p> <p>shows [1] 23:10</p> <p>shutdown [1] 80:7</p> <p>side [1] 76:21</p> <p>sign [1] 43:3</p> <p>significant [10] 9:14 19:3,25 20:3 42:17 43:11 48:19 50:6,11 81:18</p> <p>Sikorsky [1] 74:24</p> <p>similar [3] 4:15 35:16 101:8</p> <p>similar-type [1] 24:24</p> <p>similarities [1] 41:9</p> <p>similarly [2] 27:13 35:15</p> <p>simple [2] 48:10,14</p> <p>simply [4] 18:17 48:24 67:18 106:16</p> <p>single [1] 45:10</p> <p>sit [3] 13:17 15:13 107:4</p> <p>situations [1] 23:21</p> <p>size [1] 33:23</p>
---	---	--	--	--

<p>sizing [1] 46:24 Skeletal [1] 36:20 slide [5] 6:14,22 28:16 42:1 44:9 slightly [1] 23:15 small [1] 65:10 Sometimes [1] 40:25 somewhat [2] 51:13 102:13 Sooley [1] 109:11 soon [1] 33:7 sooner [1] 77:20 sorry [11] 7:19 14:4 15:12 29:4 75:19 76:17 77:21 95:20 96:4 98:15 99:13 sort [9] 1:16 6:23 18:6 28:8 32:9 51:2 62:14 99:22 104:17 sound [1] 109:7 sources [1] 71:12 speak [7] 2:22 26:4 77:24 78:6 85:18,18 89:18 SPEAKER [1] 78:3 speaking [4] 45:23 91:1 98:12,13 specialist [1] 12:10 specialized [1] 12:15 specific [8] 4:7 54:11 70:2 83:1 86:18 90:6 95:16 96:7 specifically [3] 69:13 91:14,20 specified [1] 83:23 specifying [1] 22:2 spell [3] 76:15,19 99:13 spend [2] 59:2 104:6 spill [2] 33:23 38:18 Spills [1] 33:21 splinters [1] 37:18 spoke [1] 1:8 spoken [1] 104:1 spot [1] 77:14 squarely [1] 43:22 St [8] 6:6 22:22 33:3 62:20 64:17 71:19 109:5 109:9 staff [1] 9:11 stage [2] 80:20,23 stand [1] 47:2 standard [2] 8:8 30:23 standards [10] 20:10,16 21:5,15,16,21 22:14 23:11 85:11,14 standby [2] 3:1,7 standing [3] 76:9 103:21 107:17 standpoint [1] 22:16 start [4] 23:16,20 42:13 62:4 started [5] 24:13 50:18 62:1 92:4 106:6</p>	<p>starting [2] 59:6 92:5 starts [2] 7:1 47:14 state [4] 19:23 33:20 68:3 82:4 statement [3] 22:19 48:10 49:2 statements [5] 107:10 107:13,14,16,25 States [1] 18:24 stationed [1] 58:25 statistic [1] 9:10 statistical [4] 16:22 25:9 27:13,20 statistics [4] 16:23 36:3 36:7 61:1 status [1] 56:16 stay [3] 22:12 55:14 104:15 step [1] 6:19 still [4] 46:7,7 52:1 56:3 stop [1] 38:24 straightforward [1] 37:18 strategic [1] 65:8 Street [1] 109:5 Strickland [4] 73:1,4 73:16 85:16 strict [1] 86:5 strictly [1] 97:13 strongly [2] 86:13,15 structure [1] 35:24 style [1] 35:5 Sub-Centre [1] 33:2 subject [3] 57:25 60:23 103:13 subjecting [1] 31:16 submit [2] 35:8 93:17 submitted [1] 35:15 substantial [1] 12:3 substantiated [2] 50:9 52:11 substantive [4] 73:8 89:10 90:2,11 success [2] 13:14 63:12 successful [3] 13:12 15:10 40:18 succumbing [1] 46:23 such [8] 10:13 11:6 32:8 35:12 39:10 41:15 42:21 63:4 sufficient [1] 3:15 suggests [1] 7:4 suit [1] 49:14 suitable [1] 3:10 Suite [1] 109:5 suits [3] 25:18 46:25 49:13 summary [2] 7:5 56:15 Suncor [2] 74:3,9 supervision [2] 12:19 12:20 supplier [1] 12:9</p>	<p>supply [5] 4:24 7:14 12:13 19:22 58:12 support [2] 7:9 13:18 suppose [1] 61:17 supposed [2] 84:8 101:18 surrounding [1] 26:21 survival [5] 3:10,13 5:19 5:23 75:6 suspect [1] 103:21 synopsis [2] 10:2,4 system [14] 10:16 34:12 40:18 45:9 48:12 51:10 51:16,20,24 52:2,7 99:22 100:10 107:18 system's [1] 57:12 systematically [2] 60:14 60:16 systems [13] 12:11,13 40:20 45:6 51:9 53:19 62:5,6 91:3,4,12,15,20</p> <hr/> <p style="text-align: center;">-T-</p> <p>taking [4] 6:20 45:10 59:8 81:21 talks [4] 32:3,6,7,11 tantamount [1] 18:15 Tara [1] 109:5 targeted [1] 91:14 Tarlton [13] 68:12,13,15 68:19 69:9,18,24 70:6 70:20 71:6,15,23 72:5 team [10] 32:14,15,21 45:5,7,17,21 46:1,3 49:25 technicians [1] 4:13 tend [6] 12:23 14:14 27:17 42:13 48:12 86:12 tending [1] 19:12 tends [1] 14:8 terms [7] 23:1 27:25 32:3 32:6,11 97:9 99:1 testimony [7] 68:23 69:1 70:25 79:2 81:24 93:7 93:14 tests [1] 40:18 Texas [4] 18:20,23 19:14 32:5 thank [38] 1:6 30:17 61:4 67:3,9,12 68:16,22 70:21 72:6,7 73:12,19 74:5,7 74:20 75:8,24 76:2,4 77:1 88:15,19,25 89:24 90:14,16,24 95:11 96:7 96:16,18 103:24 105:23 105:24 108:4,10,13 themselves [4] 12:21 25:19 41:22 95:3 they've [4] 15:9 27:5 83:12 88:5 third [1] 11:8 thought [1] 64:12 thoughts [1] 61:13 threat [1] 39:14</p>	<p>three [11] 47:18 72:22 77:16,16 85:25 86:6,7 86:10,10 96:10 104:11 three-month [1] 77:10 three-monthly [1] 78:23 three-week [1] 102:23 through [20] 1:7 7:2 12:14 24:14 28:9 34:25 50:2 58:11 59:10,25 60:17 61:14 71:11,12 80:19,25 86:20 88:6 101:6 107:17 tight [1] 98:5 timeline [1] 86:6 times [1] 104:9 timing [1] 103:12 tiredness [1] 102:18 today [7] 61:9 75:1,4 76:10 91:1 106:9,12 together [6] 13:23,25 14:20 15:2 45:15 53:16 Tom [1] 18:12 tomorrow [1] 106:12 too [3] 2:22 56:1 97:24 took [1] 106:8 tool [5] 8:15 13:20 27:25 44:20,21 tools [2] 44:15 63:23 top [2] 30:3 92:9 topic [1] 61:24 topics [1] 32:10 total [1] 52:9 totality [1] 43:16 towards [1] 91:14 tower [2] 8:8,12 track [2] 56:20 88:5 tracks [1] 56:15 traditional [1] 10:25 Traditionally [1] 63:10 trained [2] 3:12 32:20 training [1] 3:15 transcribed [1] 109:6 transcript [1] 109:3 transfer [1] 7:10 transferring [1] 23:20 transit [2] 38:11 52:5 transport [25] 4:11 22:25 25:16 33:3 41:13 41:14,18 43:23 44:6 48:4 49:6 68:10,21 91:12 97:17 98:3,7,8,17 99:5 99:10,23,25 100:10 106:13 transportation [15] 25:12,25 26:17,22 27:15 27:17 37:25 43:13,17 49:10 61:18 71:18 90:9 91:9,15 transporting [1] 23:17 travel [3] 23:9 48:3 59:20 travelled [1] 51:12 treatment [5] 28:20</p>	<p>37:15,19,20,21 trends [5] 17:21 21:25 42:24 63:17,25 tried [3] 18:3 36:12 60:21 triggered [1] 100:8 trip [1] 59:5 true [1] 109:3 trust [1] 60:22 try [7] 2:4 14:19 33:17 67:1 82:23 83:21 97:20 trying [4] 28:24 36:6 66:24 84:7 turned [2] 84:9 102:10 twenty-four [1] 34:9 twice [1] 14:1 two [25] 14:15,19 15:5 18:25 19:20,23 37:17 45:6 46:4,5,18 48:7 56:24 82:10 83:8,10 84:8 84:9 87:5 90:24 103:24 104:20 105:2 107:3,19 twofold [1] 22:1 type [1] 49:7 types [1] 48:7</p> <hr/> <p style="text-align: center;">-U-</p> <p>ultimately [1] 94:8 Unauthorized [1] 38:23 under [13] 8:5 12:20 20:13 21:23 35:10 41:18 41:20 42:20 58:2,4 81:3 100:10,12 undersigned [1] 109:2 understand [10] 24:5 52:3 68:17 70:1 79:2 89:4,21 90:1 91:8 106:19 understood [2] 69:12 93:14 undue [2] 31:20 46:19 unfit [2] 37:2,3 uninitiated [1] 53:23 Union [1] 90:6 unions [1] 31:15 United [1] 18:24 units [1] 12:12 University [4] 62:20 63:22 75:5,12 UNKNOWN [1] 78:3 unless [2] 47:22 108:14 unlike [1] 36:6 Unlimited [2] 109:12,14 untowards [1] 87:7 up [41] 1:22 2:18,22 6:14 6:22 12:24 13:2 16:11 23:10,23 26:23 27:5,20 30:25 31:5 33:17 42:3 43:22,25 44:7,9,11 45:13 46:9 54:7,10,19,20 55:5 56:8,10 57:13 65:21 66:9 67:19 77:24 78:10,20 82:21 89:15 102:3 used [14] 4:14 7:14 8:15 12:22 13:13 17:18,23</p>
--	--	---	--	---

<p>34:17 41:4,8 44:15 52:3 70:10,10 uses [1] 63:17 using [3] 46:3 48:3 69:11 usually [1] 75:23 utilized [1] 102:5</p>	<p>wonderful [1] 99:21 word [9] 3:21 14:25 39:18 69:11,12 70:11 97:20 99:14 100:23 words [1] 97:22 worked [6] 17:3,18 22:11 23:23 24:7 46:8</p>			
<hr/> -V- <hr/>				
<p>valuable [1] 105:18 value [1] 99:1 variety [1] 17:15 various [6] 7:2 12:25 17:18 64:1 66:11 88:6 vary [3] 12:8 104:13,19 verified [1] 60:17 verify [3] 94:14,15,22 verifying [1] 54:5 versions [1] 55:24 vessel [4] 7:13 23:17,20 39:5 vessels [1] 7:14 Victoria [1] 19:23 video [2] 1:22 49:20 view [1] 58:21 violation [3] 81:2,18,18 violations [1] 79:14 vis-a-vis [1] 108:19 visits [2] 59:16 104:2 voice [1] 34:11</p>	<p>worker [20] 12:24 22:17 24:12 26:21 38:1,2 43:1 43:2,4 48:17 55:8,11,16 59:6 85:8 94:4 101:9 102:15 103:4,15 workers [22] 10:17,20 15:6 20:5,13,19 23:22 26:3 31:16 46:22 47:3 51:11,18 52:5 71:19 84:10 85:15 93:9 102:6 102:14,19,21 workforce [2] 23:1 24:21 workplace [11] 10:17 10:21,21,23 13:21 15:16 15:17 16:4 17:19 32:12 63:5 workshop [1] 13:22 workshops [2] 15:4 27:11 world [3] 12:10 53:24 61:24 written [1] 35:13</p>			
<hr/> -X- <hr/>				
<hr/> -W- <hr/>	<p>x-rayed [1] 101:5</p>			
<hr/> -Y- <hr/>				
<p>walk [1] 54:22 warning [2] 18:6 44:3 water [1] 4:20 ways [3] 33:16 63:10,23 wear [1] 52:1 weather [4] 22:21,22 23:18 103:13 website [6] 99:5 100:5 100:14,16 107:21 108:6 week [5] 9:17 21:6,13 34:10 108:14 weekend [1] 106:14 weeks [7] 19:23 83:8,10 85:25 86:6,7,11 Wells [2] 73:5 85:17 Whalen [5] 28:21 74:12 74:13,22 77:23 whatnot [1] 12:7 whole [1] 45:9 WILLIAMS [1] 2:1 winch [2] 3:10,12 wish [1] 64:6 within [11] 9:13,19 27:19 35:9 36:7 43:23 45:11 56:6 61:24 63:2 107:13 witness [4] 72:16 77:24 85:17 89:19 witnesses [6] 72:21 74:4 75:13 89:16 106:11,12</p>	<p>year [5] 13:25 14:1 41:14 46:2 95:20 years [9] 24:3 36:2 43:14 44:1,18 56:24 57:11 91:23 92:1 yesterday [14] 1:7,10,14 4:10 5:2,5 6:13,23 9:6 10:8,25 79:2 81:25 82:4 yet [1] 11:15 yourself [1] 103:22 yourselves [1] 95:2</p>			
<hr/> -Z- <hr/>				
	<p>zero [1] 52:12</p>			