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CANADA ENERGY REGULATOR
RÉGIE DE L'ÉNERGIE DU CANADA

Trans Mountain Pipeline ULC
Trans Mountain Expansion Project
Application for Variance and Condition Relief under
Certificate of Public Convenience OC-065 Trans Mountain Pipeline ULC

Projet d'agrandissement du réseau de Trans Mountain
Demande de modifications et d'exemption relative à une
condition du certificat d'utilité publique OC-065

VOLUME 1

Hearing held at
L'audience tenue à
Canada Energy Regulator
517 Tenth Avenue SW
Calgary, Alberta

January 12, 2024
Le 12 janvier 2024

Veritext

1 IN THE MATTER OF Trans Mountain Expansion Project
2 Application for Variance and Condition Relief under
3 Certificate of Public Convenience OC-065

4

5 **HEARING LOCATION / LIEU DE L'AUDIENCE**

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7 Hearing held in Calgary, Alberta, Friday, January 12, 2024
8 Audience tenue à Calgary (Alberta), vendredi le 12 janvier 2024

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1 COMMISSION PANEL / COMITÉ D'AUDIENCE DE LA COMMISSION.

2 Kathy Penney Presiding Commissioner /
3 Commissaire president l'audience
4 Trena Grimoldby Commissioner/Commissaire
5 Sandor Sajnovics Commissioner/Commissaire

6

7 **APPEARANCES/COMPARUTIONS**

8

9 **Trans Mountain Pipeline ULC.**

10 Sander Duncanson Counsel
11 Jesse Baker Counsel
12 Corey Goulet
13 Sam Wilson
14 Jim Huber
15 Paul Huddleston
16 Rob Brown
17 Wes Dyck

18

19 **Canada Energy Regulator / Régie de l'énergie du Canada**

20 Asad Chaudhary Counsel
21 Marian Yuzda Counsel

22

23

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1 (HEARING COMMENCED AT 9:10 A.M.)

2 CHAIR PENNEY: Good morning, everyone. Hopefully
3 everyone is warm. It's a cold day to have a
4 hearing.

5 Welcome to the oral session regarding Trans
6 Mountain Inc.'s 14th of December, 2023, application
7 to vary Schedule A of the Certificate of Public
8 Convenience and Necessity, OC-065, with respect to
9 the diameter, wall thickness, and coating of pipe
10 for the Mountain 3 horizontal directional drill,
11 HDD, segment in British Columbia.

12 Trans Mountain is also applying for relief
13 from the requirement to adhere to the quality
14 management plan that was filed with the CER on --
15 well, the NEB, on March 29th, 2018, the QMP, with
16 respect to the pipe and other related materials for
17 the Mountain 3 HDD if the Commission determines
18 that such materials do not comply with the QMP.

19 My name is Kathy Penney, and I am the chair
20 of the panel that's been assigned to assess this
21 application. Next to me here in Calgary are
22 Commissioner Trena Grimoldby and Commissioner
23 Sandor Sajnovics.

24 Before I go any further, I'd like to
25 acknowledge our presence on the traditional

1 territories of the people of the Treaty 7 region in
2 Southern Alberta, which includes the Blackfoot
3 Confederacy, comprising the Siksika, the Piikani,
4 and Kainai First Nations. Treaty 7 traditional
5 territory also includes the Tsuut'ina and the
6 Stoney Nakoda, including the Chiniki, Bearspaw, and
7 the Goodstoney Nation. The city of Calgary is also
8 home to the Métis Nation of Alberta, Region 3. And
9 if there's anyone joining us online, I'd like to
10 celebrate and honour the traditional territories
11 that you are joining us from.

12 I'm going to outline some important details
13 and logistics before we get to the substance of the
14 hearing. There are two parts to this oral hearing.
15 We have questions, CER questions, for Trans
16 Mountain, both staff and the panel, and then final
17 argument from Trans Mountain.

18 We intend to finish today. We'll sit until
19 we're done with breaks as required, including a
20 break before final argument for Trans Mountain to
21 be prepared.

22 We are streaming the oral hearing live on
23 our website in both video and audio. After the
24 hearing, the audio recording will be archived and
25 available.

1 The proceeding will be transcribed, so I'll
2 ask anyone speaking to first introduce themselves
3 and to speak clearly and at a reasonable pace into
4 your microphones. Because our court reporter is
5 not in the room today, you'll note that all our
6 signs are really large to assist her in being able
7 to transcribe today's proceedings. The transcript
8 will be uploaded to the public registry, we hope,
9 by tomorrow morning.

10 For those here in person, just quickly I
11 want to talk about evacuation, and I would say
12 first, if -- there are no planned fire alarms
13 today, but if we do have to evacuate, take your
14 coat. We do scatter leaving the building. Go out
15 through the door you came in. There are stairs to
16 the right. Go to the warmest and closest coffee
17 shop, wait for a call to come back. We don't
18 anticipate any issues, but when it's this cold, you
19 don't know. But do take your coats.

20 Before we begin, I'd like to introduce
21 certain of our support staff here with us today.
22 And if you could just wave when I mention your
23 name.

24 Suzanne Brown and Merissa Reid are our
25 hearing managers. Marian Yuzda and Asad Chaudhary

1 are our legal counsel. Suzanne Bouzane and Tyler
2 Caines are our engineers, and they are accompanied
3 by our professional leader of engineering, Ian
4 Calhoun. Ian's in the back row there. Darren
5 Christie is our technical leader of economics.
6 And, of course, Edith is here as our regulatory
7 officer, and she will be doing the affirming,
8 swearing of witnesses.

9 First, we're going to start with registering
10 Trans Mountain's appearance. I'm assuming,
11 Mr. Duncanson, you'll be introducing your
12 witnesses. Please state your name. Helpful to
13 introduce all of your participants in the room if
14 there's anyone we don't already know. I don't
15 know. We've been here a couple of times. We might
16 know you all by now. And lastly, please also
17 indicate whether you have a preliminary matter. I
18 think I understand there are none.

19 So, Mr. Duncanson, over to you to register
20 your appearance.

21 MR. DUNCANSON: Thank you, Madam Chair. Good morning.
22 My name is Sander Duncanson, counsel for Trans
23 Mountain.

24 I will turn it over to my colleague Jesse
25 Baker, who will do the remaining introductions of

1 the Trans Mountain representatives.

2 MR. BAKER: Yes. Thank you, Madam Chair. And good
3 morning, Commissioners. Jesse Baker speaking,
4 pronouns he/him. I am also counsel for Trans
5 Mountain in this proceeding, along with
6 Mr. Duncanson and Kevin Thrasher, who are both
7 seated at the table with me.

8 Before I get to the witnesses, I will
9 briefly introduce the other people who are in the
10 room for Trans Mountain in case you don't already
11 know them or have maybe forgotten who they are.

12 So we have with us Rob Van Walleghem. He is
13 the executive VP, Indigenous affairs and chief
14 legal officer for Trans Mountain. We also have
15 Marie Buchinski, who is the director of regulatory
16 law for Trans Mountain. We have Tisha Homer, who
17 is the director, regulatory. And we have Bonnie
18 Wallace, who is a senior regulatory advisor at
19 Trans Mountain.

20 For the witnesses, my plan is to just state
21 their names for the record, then ask that they be
22 sworn or affirmed and then after that, I'll ask
23 them to each briefly introduce themselves and give
24 an overview of their current role and experience.
25 I'm seeing nods, so I will proceed on that basis.

1 Thank you. And then yeah, finally, we'll adopt the
2 evidence.

3 To name the witnesses, going from closest to
4 the Commission to furthest away, for the record,
5 the witnesses are Jim Huber, Sam Wilson, Corey
6 Goulet, Paul Huddleston, Rob Brown, and Wes Dyck.

7 Trans Mountain's witnesses are now ready to
8 be sworn or affirmed. I understand that Mr. Goulet
9 would like to be sworn, and the others would like
10 to be affirmed.

11 **JIM HUBER, SAM WILSON, CORY GOULET, PAUL HUDDLESTON, ROB**
12 **BROWN, WES DYCK (TRANS MOUNTAIN): SWORN/AFFIRMED,**
13 **EXAMINATION BY MR. BAKER:**

14 Q. Thank you. With that, I will now ask Trans
15 Mountain's witnesses to briefly introduce
16 themselves and give an overview of their current
17 role and experience. Let's start with Mr. Huber
18 and work our way towards Mr. Dyck. Thank you.

19 A. MR. HUBER: Good morning. My name is Jim Huber. I
20 am the director of Spread 5B, technically
21 challenging areas of Trans Mountain. I'm a
22 professional engineer with over 30 years'
23 experience in the pipeline industry, in engineering
24 and operations and major projects across North
25 America, notably with -- with Enbridge,

1 TransCanada, Pembina, and now with Trans Mountain.

2 My role on Trans Mountain is -- is really
3 to -- well, obviously, working on 5B with the
4 technically challenging areas, and, you know, the
5 Trans Mountain through the Coquihalla and Fraser
6 Canyon traverses some of the most challenging
7 terrain in North America for pipelines. My job is
8 to try to find solutions to those most challenging
9 areas and to -- to ensure that we have a
10 constructible, safe solution for very
11 unconventional construction challenges.

12 So I think Mountain 3 is one of those. It
13 has been one of those for the last 2 and a half
14 years that I've been involved with the project,
15 and -- and it's our last line, but it's probably
16 our greatest challenge. Thank you.

17 A. MR. WILSON: Good morning. My name is Sam Wilson.
18 At Trans Mountain, I'm the director of the Major
19 Trenchless Crossing group, which is a portfolio of
20 75 highly technical and trenchless crossings. My
21 role is to assess and successfully execute all of
22 the trenchless crossings utilizing horizontal
23 directional drilling, direct pipe installation,
24 microtunnel, and -- and bores.

25 I'm a professional engineer with 12 years of

1 experience directly pertaining to trenchless
2 design, management, and construction, completing
3 major projects with work scopes of various sizes
4 and materials ranging from 2-inch to 60-inch pipes.

5 A. MR. GOULET: Good morning. I'm Corey Goulet, and
6 I'm the chief project execution officer for the
7 TMEP project and have had that role for 2 and a
8 half years. I'm responsible for the execution of
9 the project and accountable for the budget,
10 schedule, safety environment, quality, damage
11 prevention, regulatory compliance, and stakeholder
12 relations.

13 I've held several leadership roles in the
14 energy industry in the areas of commercial
15 technical project management and operations, and
16 worked for various companies such as Enbridge,
17 TransCanada, Tundra Energy Marking Limited,
18 Steelhead LNG, and Kiewit. I have 38 years of
19 experience and have developed or implemented about
20 \$100 billion worth of projects in my career. I
21 hold a bachelor of science in Mechanical
22 Engineering, and I have served on Pipeline Research
23 Council International and subcommittees for CSA
24 Z662.

25 A. MR. HUDDLESTON: Hi. Good morning. I'm Paul

1 Huddleston. I'm the senior VP of engineering and
2 operations for Trans Mountain. I've worked for
3 Trans Mountain for over 33 years. I've been
4 responsible for the leadership of engineering and
5 operations, various roles, and have been
6 responsible for Trans Mountain's integrity programs
7 for the last 18 years. I'm an electrical engineer,
8 and I have overall 37 years of engineering
9 experience.

10 A. MR. BROWN: Good morning, everybody. My name is
11 Rob Brown. I'm a professional mechanical engineer
12 with more than 35 years of pipeline experience,
13 leading the engineering on numerous large-scale
14 pipeline engineering projects around the world,
15 including a large number of pipeline projects here
16 in Canada. My experience includes all aspects of
17 design, construction, and operation on pipeline
18 projects.

19 On the Trans Mountain project, my role is
20 project director for engineering with UPI, and I
21 have the overall engineer of record responsibility
22 for all pipeline design aspects on the project.
23 I've been on the project since inception in 2012.

24 A. MR. DYCK: My name is Wes Dyck. I'm a professional
25 engineer. I have been assigned on the Trans

1 Mountain project to be the pipeline engineering
2 specialist specializing in pipeline stress
3 analysis. I've been working for quite a number of
4 years on the Trans Mountain pipeline looking at the
5 HDD crossings at the bends at muskeg zones, at
6 various valve assemblies, and so on. So pretty
7 much the whole gamut of the design for the Trans
8 Mountain pipeline, again specializing on the stress
9 analysis side.

10 I have worked for 45 years, mainly in
11 Alberta, in the pipeline industry. I began with
12 Alberta Gas Trunk Line as a field engineer for a
13 few years and then came into head office and worked
14 on various pipeline projects working mainly as a
15 pipeline engineering specialist at that point, and
16 have looked at many pipelines throughout my career,
17 most of them buried, some of them above ground,
18 some of them in Alaska, some of them in Thailand,
19 some of them in Ecuador, but most of them in
20 Alberta.

21 Q. Thank you, everyone. Jesse Baker speaking again.
22 Now I'll have the evidence filed by Trans Mountain
23 in this proceeding adopted by Mr. Goulet. The
24 documents that I will be asking Mr. Goulet to adopt
25 are the following.

1 Trans Mountain's December 14th, 2023,
2 Mountain 3 Variance application, including its
3 attachments. Those are all at filing ID C27678,
4 and I'll refer to them all collectively as the
5 "variance application."

6 Next, Trans Mountain's responses to the
7 commission's Information Request Number 1 and its
8 attachments, filing ID C27873, which I will refer
9 to as the "IR 1 responses."

10 And finally, Trans Mountain's responses to
11 the commission's Information Request Number 2 and
12 its attachment. Those are all at filing ID C27965,
13 and I'll refer to them as the "IR 2 responses."

14 Mr. Goulet, do you confirm that the variance
15 application IR 1 responses and IR 2 responses were
16 prepared under your direction and control?

17 A. MR. GOULET: I do.

18 Q. Are there any corrections that the witnesses would
19 like to make to the variance application, IR 1
20 responses, or IR 2 responses?

21 A. MR. GOULET: We have a number of corrections that
22 Mr. Dyck will go through.

23 A. MR. DYCK: Yes. There's a few corrections which
24 appear in a few spots in Trans Mountain's response
25 to Information Request 1.11, its request [sic] to

1 Information Request 2.1, and Attachment 2.1-1 filed
2 with Trans Mountain's responses to the Round 2
3 information requests.

4 The numbers are the unsupported length at
5 the transition from the 48-inch to the 42-inch and
6 the resulting stresses at each end of that
7 supported length and then the resulting stresses
8 that are based on the these numbers, including the
9 combined stress.

10 MR. BAKER: Thank you. Madam Chair, we plan to file
11 corrected versions of the pages with the numbers
12 that should be changed, which Mr. Dyck just
13 provided an overview of. I think that would be the
14 easiest way to proceed rather than going through
15 the corrections page by page, if that would be
16 acceptable.

17 CHAIR PENNEY: Totally agree. And so it was to 1.1, IR
18 1.1.1, and then 2.1; is that correct?

19 MR. BAKER: So it was 1.11, but it includes -- I think
20 it's (c) and (d).

21 CHAIR PENNEY: Okay.

22 MR. BAKER: So a couple of spots, a couple of parts of
23 that response.

24 CHAIR PENNEY: Okay.

25 MR. BAKER: And in (a), I think it's just 2.1(a), if I

1 recall correctly.

2 CHAIR PENNEY: Right. The one -- the IR response with
3 all the formula.

4 MR. BAKER: Correct. Yes, yes.

5 CHAIR PENNEY: Okay. We had questions, so we will need
6 to see that, so if you can file it in writing so
7 that we can review it, say, on the break, that
8 would with very good.

9 MR. BAKER: Thank you, Madam Chair.

10 CHAIR PENNEY: So are you finished? You're finished
11 swearing -- well, adopting your evidence?

12 MR. BAKER: Just about.

13 CHAIR PENNEY: Okay.

14 BY MR. BAKER:

15 Q. So, Mr. Goulet, with those corrections, are the
16 variance application, IR1 responses, and IR2
17 responses true and accurate, to the best of your
18 knowledge and belief?

19 A. MR. GOULET: They are. And I would add that the
20 corrections we're making are relatively minor, but
21 we will provide the changes.

22 CHAIR PENNEY: Okay. That's good.

23 BY MR. BAKER:

24 Q. And do you adopt the variance application, IR1
25 responses, and IR2 responses as part of Trans

1 Mountain's evidence in this proceeding, Mr. Goulet?

2 A. MR. GOULET: I do.

3 MR. BAKER: Thank you, Mr. Goulet. And, Commissioners,
4 the panel is now available for questions.

5 CHAIR PENNEY: Okay. Just two small logistics before we
6 move on.

7 So if you need to refer to an exhibit,
8 please identify them by your filing ID. You
9 already know that. That way, Edith will be able to
10 pull it up on the screen and we can all follow
11 along, and if you have the relevant PDF page
12 number, that's also really helpful.

13 This may not be the case, but if a witness
14 can't answer a question, we can always take an
15 undertaking. That may or may not happen today.
16 And if there's a request for an undertaking, we'll
17 have to clarify timing and the scope for sure.

18 So, Mr. Duncanson, it's over to you. Your
19 witnesses are ready to go, and we can start to
20 cross them?

21 MR. DUNCANSON: Yes. That's right, Madam Chair. The
22 witnesses are available for questioning.

23 CHAIR PENNEY: Okay. Thanks very much.

24 So I'll turn it over to our counsel. Both
25 our counsel are going to ask questions. We've got

1 a number of questions. So I think we're starting
2 with Mr. Chaudhary.

3 MR. CHAUDHARY: Thank you, Presiding Commissioner
4 Penney.

5 **MR. CHAUDHARY QUESTIONS THE PANEL**

6 Q. My name is Asad Chaudhary. I am counsel to the
7 CER. I have some questions for you and then at
8 some point, we will transition to my colleague,
9 Ms. Yuzda, who has some additional questions for
10 you.

11 First of all, I want to recognize the
12 achievement in everybody getting here today. I saw
13 broken-down trains halfway up and down hills, which
14 in my decades of living in Calgary I've not seen
15 before. My typical mode of transport to the office
16 is a cargo bike. I did not cargo bike today. So
17 again, I will recognize everybody for making it
18 here on an unusually extreme weather day.

19 I'll begin. My first question is a general
20 one. It speaks to geotechnical issues. There's no
21 specific reference on this one. So with respect to
22 your variance application generally, Trans Mountain
23 has committed to installing pig trap facilities on
24 both the north and south end of the Mountain 3 HDD.
25 So my question -- first question is, are the

1 proposed trap facilities in areas with geotechnical
2 hazards?

3 A. MR. HUBER: Yes, they are, actually, within areas
4 of geohazards. It's the areas along Mountain 3
5 is -- is an area where there is potential for
6 certain areas along there where it's -- there's
7 potential for debris flows but -- and rare rock
8 fall incidents.

9 CHAIR PENNEY: I just want to remind the witnesses to
10 please state your name for the --

11 A. MR. HUBER: Oh, sorry. Jim Huber.

12 CHAIR PENNEY: Thanks.

13 BY MR. CHAUDHARY:

14 Q. Thank you, Mr. Huber.

15 Could you confirm that Trans Mountain
16 assessed the need for appropriate geotechnical
17 mitigations during construction and operation in
18 the design of these trap sites?

19 A. MR. HUBER: Again, Jim Huber.

20 Yes. We are actively in the process of
21 reviewing those. We have engaged geotechnical
22 engineers to advise us on what those -- what those
23 hazards are and the severity and any mitigation
24 measures associated with those.

25 Q. Thank you, Mr. Huber.

1 We'll now move briefly to the question of
2 water ingress, the area of water ingress. And if I
3 could have Exhibit C27678-2 brought up, please, and
4 PDF page 13. This is the variance application,
5 Section C, Technical Challenges. So PDF page 13,
6 paragraph 57, please. Thank you.

7 In the variance application -- and the
8 reference is up on the screen -- Trans Mountain
9 stated that the current rate of water ingress at
10 the HDD is 15 to 20 cubic metres per hour.

11 So my first question is, is that still the
12 case? Is the rate still accurate today?

13 A. MR. WILSON: Sam Wilson responding.

14 We see an increase in the water inflow when
15 we have stopped any operations. So when we stop
16 introducing new fluid into the system, we see a
17 dilution and then water increases as it's being --
18 not being held back as consistently with the
19 heavier drilling fluid. So when we do stop
20 operations, we do see an increase up to the 15 to
21 20 range.

22 Q. Okay. So it's still -- when it's not being reduced
23 temporarily by drilling fluid or some other
24 operations, it's still within the 15 to 20 metres
25 per hour range. Thank you.

1 Are you still pumping water out of the
2 borehole?

3 A. MR. WILSON: The water is not being pumped out.
4 It's coming out by itself from the head pressure
5 downhole. So yes, it is coming out of the
6 borehole.

7 Q. How will the water ingress be managed once pumping
8 is stopped? I guess that's a scenario you're in
9 now, and you might have answered that already.

10 A. MR. WILSON: What we are doing currently is
11 capturing the water in the mud tanks and recycling
12 system on the low side, which is the north side of
13 the crossing, and then it is being trucked away for
14 disposal.

15 Q. Do you have concerns with flow of -- with the flow
16 of water to the area after the pipe installation is
17 complete and during operation?

18 A. MR. WILSON: When we leave and don't introduce new
19 drilling fluid into the hole, we see the dilution
20 takes the water back to a clear state. So
21 post-construction, we do not see any -- any impact.

22 Q. Okay. So do you expect that after the HDD is
23 complete and, you know, during operation that the
24 water will continue to flow out of the borehole at
25 similar rates to what you're experiencing now?

1 A. MR. WILSON: Certainly, we've seen over the past
2 year and a half a consistent flow of water, so we
3 can expect that those conditions would continue.
4 We will make efforts to block it when we complete
5 tie-ins; however, there are also further
6 post-construction activities, such as French
7 drains, to divert the water once it's in a state to
8 be pumped off.

9 Q. Thank you, Mr. Wilson.

10 We're going to next move on to some of the
11 comments Trans Mountain provided in writing with
12 respect to timing of the proposed conditions. If
13 we could have reference Exhibit C27965-2 brought
14 up, please. That is the response to IR Number 2.
15 PDF page 9, please. Thank you.

16 In this response to IR Number 2.2, Trans
17 Mountain says that they plan to install the
18 facility traps following line fill but prior to the
19 in-service date. So I have a number of questions
20 just to get some details around the timing.

21 First is, how does Trans Mountain define
22 in-service date?

23 A. MR. GOULET: Corey Goulet.

24 So for clarity, we would complete
25 installation between line fill and the in-service

1 date. We'd be installing those facilities after
2 pullback and during the time leading up to
3 in-service date. The majority of the facilities
4 will be completed prior to line fill because
5 they're required for line fill. The only aspect
6 that we -- we don't think will be complete is the
7 launcher/receiver spool, and that will be completed
8 between line fill and in-service date. And it's
9 not required for line fill in any event, so -- but
10 it will allow us to run in-line inspection tools
11 starting at the in-service date.

12 And -- and to define the in-service date --
13 I think that was your second part of your
14 question was -- you know, that's the date in which
15 we -- we begin operation of the pipeline. So we'll
16 have already filled the pipeline with -- with oil,
17 and we'll be ready to begin normal operation of the
18 pipeline at the in-service date.

19 Q. So that means probably deliveries at various
20 delivery points along the route would be starting,
21 or able to start?

22 A. MR. GOULET: That's correct. We would start to
23 deliver, you know, oil to our Sumas terminal that
24 would then go down to our Puget Sound Pipeline. We
25 would deliver into Burnaby and on into Westridge,

1 correction -- your question correctly?

2 Q. I think so, but I'm going to check with my
3 colleague.

4 Could you just place sort of chronologically
5 at what point the hydrotesting would occur.

6 A. MR. GOULET: Certainly. So, you know, what we'd
7 normally -- you know, what we're planning to do as
8 part of the completion of this project is, you
9 know, pull it -- pull in the -- the pipe string
10 associated with the -- with the crossing, the HDD.
11 Then we would connect -- there's wing sections on
12 either side, mainline pipeline facilities, in other
13 words, that we would -- we'd start to construct
14 after that time period. And as -- in parallel,
15 we'd also start to construct the -- the trap
16 facilities.

17 Once all of those are complete, we would put
18 temporary pig facilities on either end so that we
19 could move water into the -- into that section, and
20 we would hydrostatically test the entire section;
21 you know, the wing sections, the trap facilities as
22 well as the HDD crossing itself.

23 Once that's complete, we would use those
24 temporary facilities to run a caliper tool, and
25 that caliper tool would confirm that there was no

1 dents or ovality that didn't meet Z662, and that
2 would complete our preparation.

3 That's the point at which we would tie
4 that -- we would have a couple of golden welds, one
5 on either side, and we'd tie it into the rest of
6 the pipeline segment, and we'd be ready for --
7 ready for line fill. Obviously, we'd need to
8 submit a Leave to Open application and get approval
9 from the CER to -- to commence that line fill.

10 And -- and after line fill, we'd finish off
11 the spool that I mentioned early, the
12 launcher/receiver spools, and -- and we'd -- we'd
13 be ready for -- for in-service.

14 Q. What's your plan in terms of timing for -- a plan
15 for Leave to Open and hydrotesting the spools?

16 A. MR. GOULET: Yeah. So if I just refer to my notes
17 on the schedule, I can provide more details
18 relative to that. And this is -- this has been --
19 bear with me here. It's subject to a little bit of
20 change because we created our schedule based on a
21 potential January 9th approval of this variance,
22 and so that's been delayed, obviously.

23 But it -- you know, provided that we get
24 the, you know, approval next week, for example, we
25 would -- and depending on the conditions, we would

1 pull back immediately, and we would complete the
2 stringing, welding, and tie-in of the -- you know,
3 of those wing sections that I spoke about in early
4 February, and we'd complete the -- the trap
5 facilities in -- in early March. And so all of
6 that would be ready for hydrostatic test at that
7 time, and we'd complete the hydrostatic test, as I
8 mentioned, the caliper runs in early March, and be
9 ready, you know, to file a Leave to Open
10 application at that time.

11 Usually, you would have the hydrostatic test
12 before the caliper runs, and as soon as you're done
13 the hydrostatic test, you would -- you would file
14 the Leave to Open associated with the hydrostatic
15 test information and any golden welds that are done
16 at that time. So that would be in the early March
17 time frame.

18 Q. I think my question was specifically with respect
19 to after you've done that, and you've used --
20 you've had the temporary sending and receiving
21 facilities in place and you've got -- you've done
22 hydrotesting, you've applied for leave to open,
23 line fill has started. At some point, you're going
24 to then replace them with permanent facilities or
25 spools.

1 Specifically for those, what is your
2 proposed timing or expected timing for hydrotesting
3 and leave to open of those components?

4 A. MR. GOULET: You know, those temporary trap
5 facilities that are receivers and launchers I
6 talked about, we're actually -- we'll actually cut
7 those out. And when we do the golden welds, we'll
8 remove those and tie it into the pipeline section.

9 So, you know, before we do line fill, we
10 would be -- complete all of -- all the welding, all
11 the hydrostatic testing, and all of the caliper
12 tools runs, and those -- that -- all that
13 information, you know, is part of the Leave to Open
14 application.

15 Q. But you're going to be installing things after
16 that; right? So that would require -- it wouldn't
17 hold up line fill, but you would still need LT0 and
18 testing of things that are installed afterwards,
19 the components?

20 A. MR. GOULET: Yeah. So to be clear, those spools
21 that I talked about, the launcher/receiver spools
22 that would be completed between line fill and
23 in-service, because of the design, they're
24 actually -- they're actually flanged facilities
25 that would be hydrostatically tested separately

1 from the main -- the main pipeline segment and the
2 crossing and the trap facilities, and we wouldn't
3 install them because we don't plan to use them for
4 two months. So -- so they'd be available before
5 in-service date, but they wouldn't -- you know,
6 they wouldn't be introduced back into the system
7 until they were used to -- to run inline inspection
8 tools.

9 And if you'll recall, you know, we've
10 offered to run inline inspection tools, one of the
11 tools within 2 months of in-service date, two of
12 the tools within 6 months, and then the last 2
13 tools within 8 months of in-service date, and
14 that's when those launcher/receiver spools would be
15 used.

16 Q. So I understand you would have done the testing
17 already, even though it would be separate -- they
18 would have been separate, but you would have done
19 the hydrostatic testing; you'd have the results
20 available.

21 Is your plan to apply for LTO for those
22 components at some point prior to them being in
23 use? Will you be doing it closer to in-service
24 date just in case or...

25 A. MR. GOULET: We would do it -- we would do it

1 before in-service date. We would, you know,
2 provide a Leave to Open with the hydrostatic
3 testing records associated with those spools.

4 MR. CHAUDHARY: Okay. Thank you. I'm just going to
5 double-check my notes before we move on to another
6 area.

7 Now, for the next question, I'm going to
8 seek some clarity. This question -- my next line
9 of questioning may be better suited to wait until
10 after you've filed your corrections. So maybe I'll
11 put a question to -- and maybe Mr. Duncanson can
12 answer this. My question relates to Trans
13 Mountain's IR 2.1(h), Henry, 2.1(h) - and if that's
14 an area subject to correction, then I'll wait
15 until -- then we'll wait until after the correction
16 is filed.

17 MR. DUNCANSON: Thank you, Mr. Chaudhary. I don't
18 believe it is, but let me just confirm with my
19 colleague.

20 I stand corrected. There are some changes
21 in that section. So if it suits the Commission, we
22 can respond to those questions after that
23 correction has been filed.

24 And just by way of update on that point, I
25 do understand that we'll be in a position to file

1 those in the morning break, whenever the morning
2 break is.

3 CHAIR PENNEY: Okay. Thanks for that.

4 MR. CHAUDHARY: Thank you, Mr. Duncanson. So I'll hold
5 off on my questions. They may be addressed or need
6 to be modified.

7 With that, Presiding Commissioner Penney, my
8 questions are concluded.

9 CHAIR PENNEY: I think we'll probably continue on with
10 Ms. Yuzda. Yeah.

11 **MS. YUZDA QUESTIONS THE PANEL**

12 Q. Good morning, Commissioners. Good morning, Panel.
13 My name is Marian Yuzda, Y-U-Z-D-A. I am counsel
14 to the Canada Energy Regulator. I have some
15 questions this morning with respect to third-party
16 inspection reports. That will be the bulk of the
17 questions that I have for you.

18 I don't know that you need to turn it up,
19 but at Exhibit C27873-2, Trans Mountain's response
20 to IR Number 1.5, and specifically material
21 quality, the response to the IR -- perhaps I'll
22 just give you a moment to flip. I see you're
23 flipping now. Thanks.

24 The response to the IR states that the pipe
25 was visually inspected upon receipt for dents,

1 out-of-roundness, corrosion, and gouges. Now,
2 third-party inspection reports that were provided
3 for the Berg pipe indicate that visual inspection
4 was carried out at the distributor site for -- to
5 inspect for physical damage, for excessive
6 corrosion, observable ovalities - that's quite the
7 phrase first thing in the morning - but there's no
8 inspection or acceptance criteria noted there in
9 that report. And then third-party inspection
10 reports, the Shawcor Strip and Recoat Reports
11 indicate that the SeAH and a JFE pipe were being
12 stripped and recoated, and inspectors in that
13 report noted handling damage, shallow round-bottom
14 pits, bevel damage, weld splatter, slivers, and
15 residual lacquer. And it doesn't appear that there
16 were any inspection criteria or acceptance criteria
17 noted there.

18 So I'm wanting to have you describe for us,
19 for the Commission, the process that Trans Mountain
20 used to inspect the dents and the ovality and the
21 corrosion and gouges.

22 A. MR. BROWN: Rob Brown.

23 Could you repeat the last request, just the
24 very last part, please.

25 Q. Yes. Thank you, Mr. Brown. Explain the process

1 that Trans Mountain used for inspecting dents and
2 ovalities, corrosion and gauges, as examples.

3 A. MR. BROWN: Thank you.

4 So the process that was used was, upon
5 determination of the number of joints needed,
6 initially, the pipes were inspected for all of
7 those items that you mentioned to exclude anything
8 that -- out of a large group of pipe joints
9 available, we needed a subset of that, so each
10 joint was inspected to ensure that ovality, dents,
11 surface corrosion that's excessive, anything such
12 as that was excluded from the pile. So it was
13 literally not acceptable at the initial receipt of
14 pipe or choosing. And then once the pipes were
15 brought in for inspection, they were inspected for
16 all of these things through the third-party
17 inspector and then those results were provided.

18 Additionally, as you noted, when the pipes
19 were stripped and then recoated, those things were
20 checked at the mill. Any particular item that was
21 out of roundness, any dents, anything like that was
22 also then excluded from the -- the number of joints
23 needed, so again, an exclusionary process versus an
24 acceptance process.

25 Then those test results were then provided

1 to the engineer of record, which is ourselves. We
2 then reviewed the test results. We investigated
3 any -- any concerns in the reports, and we
4 eventually accepted the results and -- and -- as
5 noted and filed.

6 Did that answer your question?

7 Q. Can you describe to me, like, what "inspected"
8 means.

9 A. MR. BROWN: So in the general comments I mentioned
10 about the ovality and things like that, referring
11 to that part of the inspection, the inspection
12 process is a very comprehensive process that
13 involves a number of things, including
14 documentation, but as we're discussing a physical
15 inspection of physical pipe, so the initial
16 inspection is -- is checking for out-of-roundness,
17 stencilling, making sure the traceability of the
18 pipe is there, surface corrosion, internal, any
19 kind of things such as that, gouges, dents; if
20 there's any sort of damage to the pipe ends, that
21 is noted.

22 And like I say, and in this process, those
23 items were excluded because we had a large amount
24 of pipe to be able to choose from, so we were able
25 to use an exclusionary process of inspection.

1 Q. So I heard you mention stencilling. So is this
2 largely a visual type of inspection that goes on?

3 A. MR. BROWN: Repeat just the very last part. The
4 stencilling is a...

5 Q. Is one part. Pardon me, is one part. Is this
6 largely a visual exercise that's going on that
7 you're describing?

8 A. MR. BROWN: Yeah. Continuing along the line of the
9 steps, as I say, there are many steps. But in this
10 subset of inspection and acceptance testing, that
11 is what we're talking about. There is a visual
12 inspection. They're out there physically looking
13 at the stencilling on the pipe, verifying that the
14 traceability of the material records coincides with
15 the pipe. The stencil is visual -- visible -
16 apologies - visible, legible, and complete. So
17 that part is a physical inspection to verify that
18 the pipe joints have the appropriate
19 identifications on them, and that would be the end
20 of that stencilling verification.

21 Q. So you've described your process as an exclusionary
22 process. So parts are excluded, and then what's
23 left is then inspected.

24 What -- can you describe what the criteria
25 is for accepting the pipe that -- where you note

1 these imperfections, if you note imperfections.

2 A. MR. BROWN: So once again, in this subset of
3 inspection -- we're talking about this visual
4 inspection. These are dents, anomalies, gouges -
5 anything that is visually possible to verify. Once
6 again, because of the amount of pipe available for
7 choosing, we -- we had no need to then do an
8 engineering critical assessment or anything like to
9 determine the depth of the dent or the depth of the
10 gouge. So when I mention "exclusionary," I'm
11 referring only to the part of having a large sample
12 size to choose from. That was most certainly not
13 the process once we received effectively visually
14 clean joints.

15 Q. Explain why Trans Mountain considers that this
16 inspection process and acceptance criteria is
17 sufficient or adequate to ensure that the pipe will
18 conform to the project's specifications.

19 A. MR. BROWN: Once again, Rob Brown.

20 We consider this inspection process and
21 acceptance criteria to be industry standard and
22 fully acceptable as the engineer of record for the
23 project. The -- the steps used during this project
24 and evaluation of the pipes available would -- we
25 would consider to be standard processes to be

1 followed when the pipe is available and not
2 manufactured per your -- per your process. So
3 you're starting with pipe already made.

4 So the process involves, as we've been
5 discussing at length, this visual inspection,
6 exclusion of any pipe -- if you have a large sample
7 size, you can exclude pipe that does not meet any
8 of your criteria. You can have a very high
9 standard of acceptance at that visual inspection
10 portion because, again, if you have a sample -- if
11 you have a group of 100 and you only need 10, you
12 can exclude anything that's not deemed to be
13 acceptable upon receipt. And as I mentioned, you
14 go through the visual inspection, determination of
15 the ovality issues, anything like that.

16 Then we move on to the -- as I mentioned,
17 the stencilling verification. So you're verifying
18 the physical pipe joints and making sure that the
19 documentation stencilled on the pipe and the
20 information that's available -- and that's on every
21 joint that we're discussing here on the 30-inch HDD
22 pipe -- was verified that that was available.
23 Those stencil -- that pipe identification
24 information was then verified with the distributor,
25 the MTRs, which are the material test records,

1 which are the true traceability for each pipe, are
2 available and that they coincide with the
3 stencilling. So Step 2 is that we verify that the
4 stencil information and the MTR, that every piece
5 of paper and every joint has a matching -- they
6 match together.

7 Then what we do, after all the visual stuff
8 and the recoating and any rebeveling of pipe ends
9 as necessary, the inspection acceptance criteria,
10 after the inspection reports are then reviewed and
11 accepted, the material test reports are then
12 reviewed by ourselves here as the engineer of
13 record. We do a very detailed verification of all
14 of the attributes on the MTR to verify that they
15 meet the code, they meet the Trans Mountain spec,
16 and they meet the -- they're fit for service for
17 the intended application where the pipe will be
18 used on the project.

19 We then filed and completed with the
20 project then with -- these particular ones were
21 filed with the CER also, the acceptance of those
22 MTRs.

23 So we've completed the visual and the
24 inspection of the physical attributes. We've then
25 moved on to the documented verification of the

1 chemical composition and make-up and the testing
2 that was done and the acceptance by the
3 manufacturer. We then reviewed the inspection
4 reports. After that, we then did a verification of
5 the quality management plan. Because these were
6 alternative systems, we had to rely on quality
7 management plans provided by the manufacturer. So
8 we reviewed those, and we accepted those quality
9 management plans.

10 In addition to that, we reviewed each of the
11 pipe mills and where they're from, and we verified
12 as the engineer of record that these are from
13 reputable pipe mills used, that the pipe type and
14 size, grade, et cetera, was within industry
15 standard used in Western Canada, and all of these
16 pipe mills and the type of pipe, grade, et cetera,
17 are common pipes that we've used on projects in
18 Canada, in Western Canada, as the engineer of
19 record. So we felt confident that the
20 manufacturing process from the manufacturer was
21 acceptable.

22 Then we put that in the final report, and
23 then we released it fit for -- fit for intended use
24 and released it to the project.

25 Q. Thank you for all of that. And I'm just going to

1 back you up to what I understand to be the sort of
2 first steps in that process and going back to the
3 physical inspection.

4 At any point, other than a visual
5 inspection, are there any measurements that --
6 that -- of abnormalities, gouges, dents, ovalities
7 that get taken?

8 A. MR. BROWN: Rob Brown again.

9 In this case, no measurements were taken and
10 no engineering critical assessment was needed to
11 assess any particular gouges or stuff like that.
12 Anything that would have been noted was, again, on
13 an exclusionary basis and cut out or the whole
14 joint is rejected en masse. So we did not have to
15 take measurements and do an acceptance criteria to
16 conform that it was acceptable within the code.

17 MS. YUZDA: I'm going to ask our RO to bring up Exhibit
18 C27873-8 at PDF page 63 of 99. And, Ms. Pritchard,
19 if you can just scroll up a tiny bit. Other way.
20 Pardon me. Scroll down. Thank you. Perfect.

21 Can everybody on the witness panel see the
22 picture that's in front of them? I'm seeing nods.
23 Okay.

24 BY MS. YUZDA:

25 Q. What appears on the screen looks, to my untrained

1 eye, like a worm or a gummy worm stuck under a
2 piece of paper or something, but I take it that
3 that is some type of a defect. And you've given
4 some scale there. And this was a defect that was
5 noted on a joint in a JFE pipe when it was being
6 prepared for coating, and the associated -- the
7 report states that this defect was cut out.

8 So I take it that's your exclusionary --
9 perhaps your exclusionary process that you were
10 talking about, Mr. Brown?

11 A. MR. BROWN: Yes. Short answer, yeah, that is the
12 intent of the exclusionary comment is to, as I
13 mentioned, to exclude whole pipe joints as deemed
14 to be unacceptable.

15 If during the choosing of the pipe joints or
16 during the transportation or during the inspection
17 or during the coating at any time, and in this
18 case, as you mentioned, it was deemed that -- most
19 appropriate that this can just be cut out and that
20 the joint shortened in length and made up with
21 other joints to -- to come up with the total length
22 required.

23 Q. So it would be reasonable, then, to expect that a
24 defect like this, of this size, would be found and
25 removed through -- through your quality control

1 measures or the quality control measures that are
2 implemented by the manufacturers?

3 A. MR. BROWN: Rob Brown again.

4 I think that's a correct statement. I think
5 it would be reasonable to assume that through the
6 quality control measures of the manufacturer,
7 things like this are generally caught in the pipe
8 mill and removed. If this occurred due to storage,
9 et cetera, usually those are caught upon
10 inspection, internal or external, in this case, of
11 the pipe during recoating, or, if you're not to
12 recoat, you would catch it in another method. But
13 it's -- that's a true statement.

14 Q. And would it be reasonable to expect that the
15 quality control and the inspection processes that
16 Trans Mountain implemented for its proposed NPS 30
17 pipe were adequate to find and remove all of the --
18 those types of defects?

19 A. MR. BROWN: Yeah. I believe, as the engineer of
20 record, that the processes used are acceptable to
21 determine and verify any of these imperfections.
22 As I mentioned, through the various levels of
23 inspection, we determine this. Once the pipe is
24 installed, there's another way where we're checking
25 for this stuff to hydrotest all of these things,

1 the hydrotest verification, the pipe caliper pig
2 runs, any of that is another level that provides
3 adequate security that these imperfections are --
4 generally are caught and captured prior to
5 in-service.

6 Q. At Exhibit C27873-9 at PDF pages 38 and 46, there
7 are a few notes on each of those pages. And we'll
8 start with page 38. And on that page, the
9 inspector noted a joint -- a pipe joint with a
10 patch of slivers which the vendor attempted to
11 grind down, and the slivers were deeper than they
12 appeared, and the inspector requested to have an
13 ultrasonic testing completed to verify the minimum
14 wall thickness after -- sorry, pardon me, to verify
15 that the minimum wall thickness was met after
16 grinding.

17 And then if we turn to page 46. On that
18 page, it was noted that the wall thickness at the
19 end of the pipe was measured and the pipe was
20 accepted based on this measurement. And there is
21 not very clear or any indication that ultrasonic
22 testing was carried out to verify the wall
23 thickness in the area where the slivers were ground
24 down.

25 So how does Trans Mountain verify and accept

1 minimum pipe wall thickness after grinding?

2 Mr. Brown, this is likely a question for
3 you.

4 A. MR. BROWN: Yeah. Just reading through the
5 paragraph quickly here. Apologies.

6 Q. That's fine.

7 A. MR. BROWN: Rob Brown.

8 In this particular case, reading through the
9 inspection report, it appears that the -- the
10 slivers were very superficial, if I'm reading
11 correctly where -- the middle paragraph on the
12 page. Is that the correct one?

13 Q. Correct.

14 A. MR. BROWN: Just above "coating inspection"?

15 Q. That's correct.

16 A. MR. BROWN: Yes, that's the one I'm referring to.

17 These slivers were considered to be
18 extremely superficial, and they were -- they're
19 effectively just ground down to remove the slivers.
20 So based on the inspection report and the work
21 done, we would consider that this was an extremely
22 minimal amount of material loss and more a
23 surface-finish removal of -- of imperfections,
24 so...

25 Q. Okay. So this is an example of a slight

1 imperfection, in your characterization, if that's
2 accurate.

3 But regardless of the size, how does Trans
4 Mountain verify and accept minimal -- or, pardon
5 me, minimum pipe wall thickness after grinding?

6 A. MR. BROWN: Rob Brown again.

7 As I mentioned, if the imperfection is
8 considered superficial, surface corrosion, things
9 like that, any kind of things, they're ground down
10 to effectively do a surface removal of the -- of
11 the item. The inspection report is verified to
12 determine the approximate amount of material
13 removed if it's considered to just be surface --
14 surface removal of -- of items. If it had -- if it
15 is something that, in a general sense, not in this
16 particular case, is something that -- something was
17 ground down, we would do a full inspection, UT or
18 something like that to verify the wall thickness
19 has been released. In this case, we did not have
20 to do that.

21 Q. Okay. So you did not have to -- you did not have
22 to do any ultrasonic testing is what I hear you
23 saying because you didn't find anything that was
24 substantial enough?

25 A. MR. BROWN: Correct.

1 Q. Okay. I'm going to ask one followup question,
2 perhaps two.

3 But under what circumstances would
4 ultrasonic testing of wall measurements of pipe be
5 required before Trans Mountain proceeded to install
6 the pipeline -- the pipe? Pardon me.

7 A. MR. BROWN: In a theoretical case, if we had a
8 large gouge, if we had a surface -- an imperfection
9 that required grinding beyond surface removal and
10 the inspector noted that the wall thickness was
11 affected or deemed to be affected, then that
12 would -- that would trigger that.

13 In a situation that we're talking about
14 here, relating it closer to this particular project
15 work on this MC3 thing, it's highly likely that
16 the -- as the engineer, we would -- we would
17 request that that pipe actually be removed. So we
18 would not go through a critical assessment --
19 acceptance of that material as a general sense.

20 Q. And so do you consider that approach, so the
21 approach to either ultrasonic testing where --
22 where elements of greater impact might be found or
23 in the latter part of what you just described, the
24 request to have those pipe -- that pipe part
25 removed, do you consider that to be an appropriate

1 and adequate process to -- to meet the require- --
2 like, to meet the requirements of the pipe or to
3 meet the requirements of the pipe for the project?

4 A. MR. BROWN: Rob Brown again.

5 Yes. Short answer, the answer is yes, we
6 consider that to be an acceptable -- an acceptable
7 process. The -- the verification and discussion
8 we're having here is related to pipe that is not in
9 service or near in service. So the acceptance
10 criteria, as the engineer, is far more black and
11 white, and as a general sense, we don't allow pipe
12 that has any of these imperfections or we don't
13 generally accept pipe with these imperfections to
14 get through and continue on with the process of
15 being strung out on the right-of-way and welded up
16 and hydrotested.

17 We -- when the pipe is available in the
18 stockyard or available as -- as items of commodity,
19 our acceptance criteria is much stricter, and it
20 generally is in the exclusionary process.

21 Q. At Exhibit C27873-2, PDF pages 16 and 17, which
22 were up on the screen earlier, Trans Mountain
23 responded to IR 1.5(c) as follows: (as read)

24 A complete inspection of the
25 entire pipe body was conducted as

1 part of the stripping process at
2 the coating plant and was
3 witnessed by a Trans Mountain
4 inspector.

5 See that?

6 In the associated reports that I'm not going
7 to ask you to turn up, the associated reports state
8 as follows. The inspection reports under the
9 summaries titled " Grind Rack," "Bare Steel
10 Inspection" made the following statements. So:
11 (as read)

12 The inspector noted that the pipe
13 at the grind rack was not being
14 100 percent inspected, and
15 notified the vendor. Usually, two
16 people are present at the grind
17 rack for the vendor, and today,
18 only one person was present.

19 A bit later on in the report: (as read)

20 The vendor noted that they were
21 running shorthanded and only one
22 person was stationed at the grind
23 rack.

24 And then lastly: (as read)

25 Not every pipe body or pipe end

1 could be observed on the grind
2 rack as the lead inspector was
3 moving between stations.

4 Does Trans Mountain require its inspectors to
5 inspect every joint of pipe?

6 A. MR. BROWN: Rob Brown again.

7 So for the pipe on this particular project,
8 this is an Inspection Level 1, which is full
9 inspection of all -- of all pipe joints on the
10 project is the -- is the standard that we are
11 following.

12 Q. And are you able to speak to the statements to
13 which I just referred and how those measure up
14 against what you just described to me, which I
15 think was that you -- it's an Inspection Level 1,
16 so you would expect every pipe joint to be
17 inspected?

18 A. MR. BROWN: Yes. We -- I think what you mentioned
19 was that there was not two inspectors available, if
20 I -- if I...

21 Q. So -- correct. There was not two inspectors
22 available, and not every pipe -- not every pipe
23 body or pipe end could be observed on the grind
24 rack as the lead inspector was moving between
25 stations.

1 A. MR. BROWN: Rob Brown again. Yeah. So the
2 reference we're discussing here is related to one
3 inspection level done at a particular location on
4 the grind rack. What I will bring to your
5 attention is that there are many levels of
6 inspection, as I mentioned. We're looking at pipe
7 prior to coating inspection. Once it's been
8 stripped, it gets checked at -- on, as you
9 mentioned, in this particular case, on the grind
10 rack. And then as the pipe is released, we have
11 other inspection levels provided. We've had field
12 engineers out on site looking at this pipe.

13 So there are many levels of inspection as we
14 go along, or verification.

15 Q. So then would it -- is it your evidence that -- is
16 it your -- let me ask it this way: Has Trans
17 Mountain carried out -- so you would have carried
18 out additional inspections to account for the
19 possible lack of inspections at one particular
20 level during -- during the pipe stripping process,
21 either by the vendor or by Trans Mountain?

22 A. MR. BROWN: Rob Brown again.

23 So the inspection -- the various levels of
24 inspection, formal and informal -- and when I
25 mention "informal," being on the -- on the -- a

1 verification of an anomaly, these are highlighted.
2 So for example, if we have one of the engineers
3 reviewing the -- and inspecting the pipe, they only
4 need to provide an inspection report if something
5 is -- is noted. If the pipe joints look normal, if
6 the coating that had been applied looks adequate
7 and complete, there's no report required for that.

8 So we -- we are discussing the various
9 levels of inspection that -- that provide that --
10 assurances that the whole quality control process
11 from start to finish has met the objectives of the
12 spec and of the code.

13 Q. Okay. And can you explain -- can you explain why
14 Trans Mountain considers that -- that process to be
15 appropriate or adequate -- appropriate or adequate
16 inspection of the pipe?

17 A. MR. BROWN: Rob Brown again.

18 Yeah. So as I mentioned earlier in the
19 testimony, we go through a very rigorous quality
20 control on each joint of the pipe on this
21 particular HDD section. So as I mentioned, we have
22 that visual inspection upon choosing, visual
23 inspection upon receipt. We then have qualified
24 third-party inspectors who must do the inspection
25 based upon the quality assurance guidelines that we

1 have written up as the engineer of record. So we
2 indicate what inspection levels and what inspection
3 items must be reviewed and accepted -- provided.

4 Then we review the results, and we determine
5 that the ITP, the inspection test plan, meets --
6 has been met through the inspector and then we
7 provide the acceptance of that. That is considered
8 to be at the very highest level of how we can do an
9 inspection in the industry.

10 Q. So just going back to your IR response C that talks
11 about a complete inspection of the entire pipe body
12 was conducted as part of the stripping process.

13 Given all that you've just described for me,
14 Mr. Brown, how do you confirm that every pipe has
15 been inspected?

16 A. MR. BROWN: So as the engineer of record, we -- we
17 rely upon third parties to do a vast majority of
18 the field work. So as is in this case, we provided
19 the criteria to the third-party inspector. The
20 third-party inspectors were then present to review
21 each and every one, and we receive inspection
22 reports for all joints of pipe.

23 Q. Staying with the same IR response --

24 CHAIR PENNEY: Ms. Yuzda, I don't know if you're in the
25 middle of a series of questions that are related

1 because it might be good to take a break soon.

2 MS. YUZDA: Now would be a fine time to take a break,
3 Madam Chair.

4 CHAIR PENNEY: Good.

5 We do, Mr. Duncanson, need that correction.
6 We have questions that we need to revise based on
7 it.

8 MR. DUNCANSON: Yes. Certainly, Madam Chair. My
9 understanding is we are in a position to provide
10 those. I would just seek leave for counsel to be
11 able to confer with the witnesses solely for the
12 purpose of verifying that the corrections are
13 accurate before we provide them to you.

14 CHAIR PENNEY: Okay. Yeah. You understand the process.
15 Yes. And then how much time before we get the
16 corrections?

17 MR. DUNCANSON: 15 minutes for a break should be
18 sufficient to get those prepared.

19 CHAIR PENNEY: Yeah, but we need time to review them.
20 So if you take 15 minutes to prepare them and get
21 them to us, then we need 15 minutes to review them.

22 MR. DUNCANSON: Perhaps just if you could give me a
23 minute, Madam Chair, I can get a more accurate
24 estimate of how long it's going to take us.

25 CHAIR PENNEY: Okay. We do want you to get them right,

1 so we don't want to rush you.

2 MR. DUNCANSON: Yeah. I think -- obviously, we will
3 prepare them as quickly as we can. I think our
4 best estimate right now is that it will take
5 roughly 15 minutes. We just want to make sure that
6 we have time to confer with the witnesses and make
7 sure that everybody's comfortable before we file
8 anything.

9 So if the Commission requires 15 minutes
10 afterwards, it looks like we're probably looking at
11 a 30-minute break.

12 CHAIR PENNEY: Yeah. So why don't we right now set it
13 for 30 minutes, assuming that we can get the
14 corrections from you. So we'll return at 11, if
15 that's correct. And if there's a problem, please
16 let our counsel know, and we can adjust the timing.

17 So we'll return at 11. Thanks, everyone.

18 **(PROCEEDINGS ADJOURNED AT 10:33 A.M.)**

19 **(PROCEEDINGS RECONVENED AT 11:04 A.M.)**

20 CHAIR PENNEY: Mr. Duncanson, I just say we didn't
21 receive the corrections yet. Maybe they're
22 somewhere in the ether and maybe the ether is
23 moving slowly because of the cold. Did you submit
24 it?

25 MR. DUNCANSON: We'll blame it on the cold. My

1 understanding is it's either in the inbox or it
2 will be there any moment, but it is certainly in
3 the process of being uploaded.

4 CHAIR PENNEY: Okay. Momentarily, okay. Because we
5 haven't received it, we haven't been able to review
6 it, so what we'll do is we'll finish with this line
7 of questioning. We'll probably take a 15-minute
8 break so we can review those corrections and then
9 finalize staff questions. So if that's okay,
10 that's kind of where we are.

11 MR. DUNCANSON: Yes, absolutely, Madam Chair. Whatever
12 process works best.

13 CHAIR PENNEY: Okay. Perfect.

14 So back to Ms. Yuzda.

15 MS. YUZDA: Thank you, Madam Chair and Commissioners.

16 Ms. Pritchard, if you can again bring up
17 Exhibit C27873-2 at PDF page 17. Thank you.

18 BY MS. YUZDA:

19 Q. So this response, which we've been talking about
20 quite a bit this morning, states that all records
21 resulting from the inspection, testing, and
22 acceptance of the materials have been reviewed by
23 TMEP quality assurance personnel and/or the
24 engineer of record, Mr. Brown. Third-party
25 inspection reports are provided as attachments,

1 Attachment 1.5, and the report cover sheet. Those
2 sheets contain a revision log table with a block
3 reserved for recording TMEP review.

4 The TMEP review is not apparent in that
5 attachment, and if you'd like, I can ask to have
6 that turned up.

7 MS. YUZDA: Ms. Pritchard, we're looking for Exhibit
8 C27873-8. And if you can scroll up to the first
9 page. And then perhaps just scroll down one more
10 page. Okay. Scroll back up half a page, please.
11 Right there.

12 BY MS. YUZDA:

13 Q. Mr. Brown, can you see that up on the screen?

14 A. MR. BROWN: I most certainly can see the revision
15 block.

16 Would it be possible to see a more
17 generalized view of the page for one second?

18 Q. Absolutely.

19 A. MR. BROWN: Thank you. I was just verifying I had
20 the same document that's on the screen.

21 Q. Thank you. So have third-party inspection reports
22 been reviewed by TMEP quality assurance personnel
23 or by the engineer of record?

24 A. MR. BROWN: Rob Brown. I'll answer part of that
25 question. I'll answer on behalf of the engineer of

1 record. Yes, the inspection reports were reviewed
2 by our materials engineer in its entirety for this
3 particular project.

4 Q. And can you point -- I see you're conferring. I'll
5 give you a moment.

6 A. MR. BROWN: Rob Brown again. I'll continue the
7 answer. So I have verified personally that the
8 quality assurance inspectors -- quality assurance
9 personnel for TMEP have in fact reviewed the
10 reports. I was present in the meeting where that
11 was discussed and agreed.

12 Q. And is there anywhere that you can point to in --
13 in this report where the quality assurance
14 personnel or where the engineer of record has
15 acknowledged its review of the third-party
16 inspection reports?

17 A. MR. BROWN: Rob Brown again. Yes, I can. I'm just
18 trying to find the reference document.

19 Rob Brown again. I believe I have the
20 reference in -- I apologize. I can't -- I'm not
21 sure of all the numbers to refer to. C27873, IR
22 Number 1 response - I'm not sure if I gave the full
23 number - the Trans Mountain Response 1.5 in the
24 Trans Mountain document on page -- PDF page 16 and
25 17. Have I given sufficient information to

1 provide?

2 Q. Just a moment. Thanks, Mr. Brown.

3 What I'm looking for, Mr. Brown, is where
4 the engineer of record or where the quality --
5 quality assurance personnel would have actually
6 signed off on these inspection reports. So in the
7 exhibit that's up in front of you, you can see
8 there's an empty space that says -- where the title
9 reads "Reviewed by TMEP" and then the space below
10 is empty for that particular report. And this,
11 subject to you checking, is a similar state on the
12 cover page of not just this report but other
13 reports as well.

14 So I -- what I'm wanting to know is where --
15 where is the -- where is the signoff that we can
16 expect to see that isn't on this cover page?

17 A. MR. BROWN: Rob Brown again. The reference I was
18 referring to was the statements by the EOR and --
19 by myself as the EOR on behalf of the quality
20 assurance personnel that all of the documents were
21 reviewed and accepted.

22 I believe the document that's in front of
23 you -- or, sorry, in front of us on the screen --
24 was just on the screen, referencing those
25 particular inspection reports, we're in the process

1 of getting all that documentation signed. But as I
2 mentioned, as we've stated in Response 1.5(c), the
3 relevant inspection reports were provided to the
4 EOR for review and approval. Subsequent to review
5 and acceptance by the EOR, the final inspection
6 reports were issued to TMEP quality assurance
7 personnel for signoff and filing.

8 Trans Mountain confirms that it has received
9 the final inspection reports and has reviewed them
10 and confirmed they are consistent with the
11 information provided relied on by the EOR.

12 So would you like me to bring that up in
13 more specifics?

14 Q. No. That's fine, Mr. Brown. I can see the
15 reference. Thank you.

16 And has Trans Mountain quality assurance
17 personnel or the engineer of record accepted the
18 methodology, then, and the content of the
19 third-party inspection reports? Is that within the
20 scope of what you're pointing me to in the IR
21 response you just read to me?

22 A. MR. BROWN: Rob Brown again.

23 Yes, I can confirm that. The methodology
24 and process used for the third-party inspection and
25 the subsequent acceptance of that is determined by

1 a quality assurance record produced by the EOR for
2 the third-party inspector to follow for all
3 materials, including the pipe. They then must
4 provide the inspection in accordance with that
5 acceptance criteria, and our engineer of record
6 then verifies that inspection reports and the
7 inspector's notes do in fact go through and verify
8 all of the quality assurance steps and processes
9 and values needed by the engineer.

10 As the engineer of record, we then read
11 through the reports, verify that the information is
12 sufficient for our acceptance of that material as
13 fit for use with the project.

14 So yes, we feel -- we feel that the process
15 and procedures used in this are adequate for
16 determining the quality and use of the third-party
17 inspector as a verifiable tool for the engineer of
18 record to accept.

19 Q. I heard you mention the methodology and the
20 process. What about the substantive content?

21 A. MR. BROWN: Rob Brown again.

22 So the engineer of record, materials
23 engineer reviews each of the inspection reports in
24 detail, reads them all, and then verifies that the
25 information is as required, and if there's any

1 anomalies noted in the inspection report, does an
2 assessment to determine the criticality of that
3 point, and subsequent actions would be taken if
4 something was noted.

5 Q. And turning again to the same exhibit that we've
6 been discussing for the better part of the morning,
7 again, C27873-2, but this time at page 16, which is
8 Trans Mountain's response to IR 1.5(b).

9 A. MR. BROWN: Apologies. Could you repeat the
10 number. 1.5...

11 Q. Pardon me, yes. 1.5(b), as in brown.

12 A. MR. BROWN: A great reference.

13 Q. So Trans Mountain has determined that each MTR was
14 reviewed for compliance with the TMEP pipe
15 specifications, applicable regulatory requirements,
16 and the CSA code. Now, there was an attachment to
17 this IR response - and I can bring it up if you
18 would like - which is Exhibit C27873-7, and that is
19 attachments 1.5-3, MTR assessment, and on the PDF
20 page 3 of 3. That --

21 A. MR. BROWN: I'm with you.

22 Q. Thank you. That table is titled "MTR Assessment."
23 And that table contains information with pipe heats
24 from three manufacturers. And the last three
25 columns of the table indicate "pass" for "tensile,"

1 "yield," and "yield over tensile," or Y over T.

2 MS. YUZDA: Ms. Pritchard, are you able to, not able to?

3 Okay. So the important part -- oh, thank you,

4 Ms. Pritchard.

5 BY MS. YUZDA:

6 Q. So turning to those last three columns, can you
7 explain whether Trans Mountain's determination of
8 pass for tensile and yield strength of the pipe
9 heats indicated in the table was based solely on
10 the information in the MTRs or if it was an
11 independent testing that was undertaken by Trans
12 Mountain that allowed these conclusions?

13 A. MR. BROWN: Rob Brown again.

14 For the particular items you're discussing,
15 the last three columns, the criteria used for that
16 particular item that we're discussing, which is a
17 pass/fail criteria, so there's virtually only two
18 options there, pass/fail, that is the -- that is
19 the only thing used, was the review of the MTRs and
20 the acceptance based on the code specs and the
21 applicability to the project.

22 MS. YUZDA: Madam Chair, Commissioners, those are my
23 questions.

24 CHAIR PENNEY: Okay. Thank you very much, Ms. Yuzda.

25 We're just -- I'm conferring with the team

1 to see if we're good to go.

2 Yeah. Okay. We're good to go. We did
3 receive the corrections. The intrepid team has
4 reviewed, and they're ready to go.

5 Okay. Mr. Chaudhary.

6 MR. CHAUDHARY: Thank you, Presiding Commissioner
7 Penney.

8 **MR. CHAUDHARY QUESTIONS THE PANEL**

9 MR. CHAUDHARY: Ms. Pritchard, if we could pull up the
10 corrections. So that's Exhibit C27991-3 at PDF
11 page 5, the corrected response to IR2.1(h). Thank
12 you.

13 BY MR. CHAUDHARY:

14 Q. Now, I have a few questions about the bending
15 stresses. That's what this IR response is about.
16 You'll have to bear with me. It's been 18 years
17 since I was in 4th-year engineering and I have
18 never applied that knowledge since. Law school has
19 a good way of purging other things out of your
20 head. But let's see what we can do.

21 Specifically with respect to the transition
22 at the north end, could you confirm that the
23 30-inch pipe naturally drapes over the 3-inch
24 step - and that's the step between the two borehole
25 diameters - and touches down on the bottom of the

1 48-inch bore at the settling point. And I can
2 repeat that if you like.

3 A. MR. WILSON: Once the pipe is pulled into the
4 borehole, it will rest in the borehole, and it will
5 transfer from the 42-inch to the 48-inch, and the
6 calculations suggest that it will be on the bottom
7 of the worst-case condition of an unsupported line.

8 Q. And then so it will settle down, and it would be
9 accurate to say that it's naturally draped?

10 A. MR. WILSON: Yes.

11 Q. Thank you.

12 Now, in the IR response, Trans Mountain
13 provides bending stresses with corrected values at
14 the upper end and at the lower end.

15 With respect to those values, could I ask
16 you to explain why the bending stress at the lower
17 end of the unsupported span at the settling point
18 is nonzero?

19 A. MR. DYCK: At the two ends -- Wes Dyck responding.

20 The model that appropriately deals with pipe
21 draping is a beam that is supported at each end by
22 a fixed end, and that is where we have the largest
23 moment, at each end. At the middle part, where the
24 pipe has draped down -- and the middle part will be
25 where the pipe has touched down to the bottom of

1 the 48-inch bore. At that point, that is the
2 midpoint of the beam. And so the beam classical
3 formula shows the moment is one half the value at
4 the midpoint of that beam compared to at the
5 endpoint, where it's the -- the full value. And
6 that has to do with the length of pipe that is
7 affecting the bending moment.

8 Q. Thank you. I'll take a moment, please.

9 Thank you, Mr. Dyck. I have one more
10 question. Given the bending stresses that you've
11 provided and the corrected values that we've
12 received today, what would be the reaction to the
13 unsupported span at the settling point under pipe
14 weight and the weight of oil? I think I'm -- we're
15 looking for magnitude and direction.

16 A. MR. DYCK: Sure. In (j), we show the reaction
17 force at the end, at the top of this settling zone.
18 The reaction force at the bottom of the settling
19 zone would be equal to that at the nose end.

20 Q. Thank you. And could you confirm the direction -
21 up or down?

22 A. MR. DYCK: The pipe will be applying a downwards
23 load at both points due to the weight of the pipe
24 and the oil.

25 MR. CHAUDHARY: Thank you, Mr. Dyck. Let me just check

1 my notes. That might be all I have.

2 Thank you. I appreciate those
3 clarifications.

4 With that, Presiding Commissioner Penney, my
5 questions are concluded.

6 CHAIR PENNEY: Okay. The panel will have questions, but
7 what I'd suggest is -- I'm trying to, you know,
8 manage the time before lunch, assuming that we want
9 to have lunch at around 12-ish or so. We can take
10 15 minutes now, come back, and start on panel
11 questions. It seems really early to start lunch
12 for sure. Our lunch isn't going to be anywhere
13 near where we need it for a little while.

14 Mr. Duncanson, does that seem right? We
15 take 15 minutes, come back, and start panel
16 questions?

17 MR. DUNCANSON: Yes. That's certainly fine with us,
18 Madam Chair.

19 CHAIR PENNEY: Okay. So we'll do that. We'll come back
20 at quarter to 12 and start panel questions for the
21 witnesses. Thanks so much. And thanks for getting
22 the corrections in.

23 **(ADJOURNMENT)**

24 CHAIR PENNEY: Okay. The panel has a couple of
25 questions for the witnesses and then we'll turn to

1 reaming, you took some sample data in Table 1.1 and
2 Attachment 1.1 of the IR responses, including data
3 dates from November that I -- there wasn't any
4 readings of 30 metres cubed per hour.

5 So the question is, I just want to
6 understand the degree of risk from increased rates
7 of water ingress that was part of the reason that
8 this application was made, given the rates that you
9 found in your Table 1.1-1 and Attachment 1.1 in
10 your recent IR responses.

11 A. MR. WILSON: Sam Wilson responding. That is quite
12 a long question.

13 You can see in our table that we've given
14 quite a large range for each ream pass. Each ream
15 pass takes 4 months to complete on average. So we
16 have quite a lot of data to pull through. So these
17 are high and low values for the whole process.

18 The 30 metres cubed is the peak we saw at
19 the pilot hole before we implemented our last
20 grouting, pressure grouting. So once we did the
21 pressure grouting, we were effectively able to drop
22 it to about 3-and-a-half metres cubed per hour for
23 the 24-inch pass to the next ream pass.

24 As we've seen in this table, we haven't
25 really seen greater than 20 to date yet. Again,

1 however, you can see the lower band of all of those
2 ranges is increasing. So the effectiveness of our
3 grout mitigation is weakening and then becoming
4 less effective.

5 The 48-inch ream pass, we have not reamed
6 through the water-producing zones. We've reamed up
7 to general location of where we have witnessed them
8 before. So we don't know if, when we continue with
9 the 6-inch larger cut of the 48-inch, if it
10 completely knocks out all of our grout mitigation.

11 We also got a peak of 30 metres cubed per
12 hour on a much smaller pilot hole. You know, if we
13 knock out all the grout on a much larger ream pass,
14 does it get in excess of 30? It's a large risk if
15 it does, and the risk is that amount of water
16 inflow, especially the, you know, 20-metre cubed
17 and up, really starts to dilute the drilling fluid.

18 The effectiveness of the drilling fluid is
19 how we clean the borehole. We clean all the
20 cuttings and debris out of the borehole as we're
21 reaming. If we don't have the ability to keep a --
22 a mud system together downhole, we have to do
23 additional pulling out the reamer more frequently
24 to mechanically pull all the cuttings out, and
25 again, the effectiveness is -- is greatly reduced

1 at that -- the addition of more rock and -- and
2 cuttings in the borehole has more wear on the
3 tooling as well, especially the drill pipe rotating
4 on -- in the hole. So we would expect a lot more
5 tooling breakages, a lot more tooling wear to
6 compound the issue of -- of being able to remove
7 the cuttings.

8 So to quantify the risk is -- it's a -- you
9 know, we -- I don't have the exact probability of
10 if this grout is going to be effective throughout
11 the full 48-inch ream pass. You know, our -- our
12 solution is that we have a hole now that is
13 suitable for a 30-inch pipe, and we have the
14 engineering and -- and program together to show
15 that it would be an effective solution to not
16 hamper the whole project while not inducing any
17 further risk to this ream.

18 Q. Thank you, Mr. Wilson.

19 And then my second question. So this is a
20 short question.

21 So earlier this morning, we spoke about the
22 inspection reports and the signatures from the EOR.
23 And the last thing - I'm trying to remember
24 correctly - was October 18th of 2023, and we're --
25 and they're still waiting for signatures at Trans

1 Mountain. I understand they're going through the
2 process.

3 My question is just, what is the typical
4 process in -- at Trans Mountain after you get --
5 after the EOR has signed off on those inspection
6 reports internally for Trans Mountain to sign off?
7 Just what is typical time frame?

8 A. MR. HUBER: Jim Huber.

9 I think the -- you know, it varies widely.
10 I think it really depends upon what the -- what the
11 type of inspection report is or what the technical
12 document is, and you know, many factors that go
13 into it. I think there's probably cases where, you
14 know, it's gone several months. Obviously, this is
15 one of them. And sometimes you get lucky -- well,
16 maybe not lucky, but the process works well and you
17 can get that signoff, you know, within a day.

18 So I think it varies widely, but generally,
19 after the engineers or whoever is preparing and --
20 and reviewing and approving that document, it goes
21 in, you know, it should be faster. I agree. It
22 should be -- it should be, definitely, faster, but
23 sometimes they do drag on and sometimes they fall
24 into a black hole and if somebody's not there to,
25 you know, move it along, it can sit.

1 MR. SAJNOVICS: Thank you, Mr. Huber.

2 Madam Chair, I do not have any further
3 questions.

4 CHAIR PENNEY: Okay. I have two. And I'm going to
5 break the rule.

6 Edith, can you pull up IR Number 1. And I'm
7 looking at the response to 1.7. And I think I have
8 a PDF Number 21, but I'm not sure if that's
9 accurate. So just a little bit further down.
10 There. Perfect.

11 **CHAIR PENNEY QUESTIONS THE PANEL**

12 Q. So the response to this question, the first
13 paragraph there talks about all the materials are
14 going to be evaluated and tested per the applicable
15 ITP and then talks about materials procured under
16 the AML and in accordance with the QMP and then it
17 says, "Trans Mountain will confirm with the
18 Commission when testing has been completed."

19 And I think the question from me is, and I
20 guess also of staff is, what testing are we
21 referring to in that sentence? What testing are
22 you going to confirm with us, and pursuant to what
23 condition or what filing? So I'm just wanting --
24 what testing?

25 A. MR. HUBER: Jim Huber again.

1 So this is -- I think this is particularly
2 referencing the traps and fitting materials. So
3 this is obviously something that we've been working
4 on very hard on over the last month. You know,
5 we've gone through design. We've gone through
6 material procurement. Materials are arriving
7 literally as we're speaking. So, you know, some
8 has -- has been in the fabrication shop, other is
9 still to come. I think on our schedule, the
10 last -- the last fittings that were expected are
11 somewhere around February 5th. Valves, for
12 example.

13 So we have two valves -- two 36-inch valves
14 that are surplus from TMEP that have gone through
15 full inspection and testing. Those are completed.
16 We have 30-inch valves that we've procured that are
17 going through testing right now. In fact, I think
18 they're being prepared for hydrotesting right now.
19 It's a little bit on the cold side to test them
20 this week, so...

21 You know, as far as fittings go, as -- as
22 the fittings come in and are received and get
23 visual inspections through the shop and through our
24 inspection, you know, those reports will be
25 produced and generated. So as they're available,

1 we will generate those and we will produce them as
2 required or as requested.

3 Q. Okay. It says, yeah, you'll confirm with us when
4 the testing has been completed.

5 Is that part of like a Leave to Open filing?
6 That's what that would be?

7 A. MR. HUBER: Jim Huber again.

8 Yeah, that would -- at the very -- at the
9 very latest, it would be part of Leave to Open.

10 Q. Yeah. Just wanting to confirm when that will come
11 in. Okay. That's my first question. My second
12 question is for Mr. Brown.

13 Mr. Brown, we were very -- well, actually,
14 no. I should just thank Trans Mountain for
15 bringing the engineer of record. We've heard about
16 you, we've seen about you, and the fact that you
17 showed up today, we're very pleased.

18 So I had, like, a two-part question. One I
19 guess might be for Mr. Goulet and then the other
20 for Mr. Brown.

21 My understanding is the quality management
22 plan, Trans Mountain's quality management plan,
23 says that Trans Mountain quality assurance
24 personnel would sign off on things, but what we see
25 in front of us is that the engineer of record is

1 signing off on things.

2 And so I'm just checking with you,
3 Mr. Goulet, like, that change -- is it -- you know,
4 is Trans Mountain comfortable with that, and when
5 did that change occur? And -- yeah.

6 A. MR. GOULET: Yeah. Corey Goulet.

7 I don't think a change occurred. What you
8 see there is the engineer of record approves
9 through the ITP, you know, various testing and
10 engineering records and then the quality assurance
11 is looking at those records and confirming, you
12 know, that the engineer of record has done their
13 job. It's -- it's, again, an assurance activity,
14 not a -- they're not stamping the drawings or
15 stamping the records.

16 And so, you know, as -- as Mr. Brown
17 indicated earlier, that quality assurance hadn't
18 been completed on all the documents that were
19 supplied in this package, but, you know, through
20 conversations, we know that our quality assurance
21 people have reviewed them now, and they're --
22 they're being signed off. But it -- the most
23 important aspect is the engineer of record and the
24 subject matter experts have signed the documents
25 and approved those documents.

1 Q. So do I understand you to say that there's a
2 sequence of events: The engineer of record signs
3 off and then Trans Mountain's assurance personnel
4 accept? Is that kind of --

5 A. MR. GOULET: That's right, yeah.

6 Q. -- the sequence? Okay.

7 A. MR. GOULET: Yeah.

8 Q. And my second question is for Mr. Brown: What does
9 an engineer of record do, and what are they
10 responsible for? And I hear you referring to
11 almost a team of people who are working with you,
12 but it's your name on it. So what does an engineer
13 of record do?

14 A. MR. BROWN: Rob Brown.

15 Yeah. I would -- I would love to say that I
16 was able to do the engineering of this project by
17 myself, but there's a few people here that know me
18 well and know that is not a true statement.

19 So the engineer of record -- and the way I'm
20 referring to it, there are various levels of that.
21 The one I've been referring to in a general sense
22 and as we've been looking at the documentation
23 here -- so we represent the engineer of record on
24 the project contractually and legally under APEGA
25 and with EGBC. So we are the engineer of record.

1 The engineer of record is responsible to
2 ensure that the design meets the code, specs,
3 standards, and is fit for use for the intended
4 purpose of what that is. So we of course have
5 taken that responsibility from day 1. We continue
6 to have that.

7 My role within that organization and with
8 that structure is I am responsible. I am the lead.
9 I am the project director of engineering for the
10 project, so I have sole responsibility to ensure
11 that those things are being done within the
12 organization and with the various, at times,
13 hundreds, of other people working on it.

14 The second level that I will talk about is
15 on individual designs and individual items. So as
16 you guys know, Wes Dyck -- I'll use my good friend
17 here, Wes, as an example. Wes's level of knowledge
18 on stress calculations and stress matters is
19 infinitely greater than mine.

20 So Wes is the engineer of record for the
21 stress analysis calculations being done. So he's
22 responsible for making sure that if there are other
23 engineers doing work below him, that he is taking
24 responsibility; he's doing oversight and checking.
25 And in that case, Wes works for me. I'm a

1 professional engineer. He and his team are doing
2 work within my realm under APEGA and EGBC and also
3 contractual obligations with the client to make
4 sure that we are many times exceeding the -- the
5 regulatory requirements from APEGA or EGBC.

6 So we have various EORs, and on this
7 project, we have a very formal process through the
8 EGBC. There's a -- there's a coordinating
9 professional engineer designation that is put in.
10 That person is responsible for making sure that -
11 and that is our responsibility, again - making sure
12 that there is an EOR for every subject matter area.
13 We don't have Wes responsible for stress and
14 something else. I don't know. Whatever. We have
15 specific engineers assigned for each area:
16 Mechanical, civil, electrical, on and on. There's
17 a very large amount of them. And then we have
18 field reviewers that enact them.

19 Q. I'm going to ask you, for the record, to explain
20 what APEGA and EGBC is.

21 A. MR. BROWN: I apologize. Rob Brown again.

22 APEGA is the Association of Professional
23 Engineers and Geoscientists of Alberta. It's the
24 professional regulatory body.

25 And EGBC is the Engineers and Geoscientists

1 or Geophysicists -- I apologize, I don't have it
2 memorized -- of British Columbia, so...

3 Q. Okay. And there are professional standards for
4 both of those associations?

5 A. MR. BROWN: Yes, there most certainly are. Both of
6 them have adopted professional practice management
7 plans that you must follow as engineering firms to
8 ensure you have a very high level of quality
9 control and that an engineer of record is in place
10 and that the processes and procedures and the
11 registered -- registrants, they -- they are
12 overseeing the permit to practice for both Alberta
13 and B.C., and that those permits to practice are
14 applied as required and the process of engineering
15 has been done on each document.

16 So it's a very formal process for both of
17 those provinces.

18 CHAIR PENNEY: Okay. That's very helpful, Mr. Brown.

19 So those are my questions.

20 Looking to Mr. Duncanson for any redirect.

21 MR. DUNCANSON: We have no redirect, Madam Chair.

22 CHAIR PENNEY: Not even about those stress calculations?

23 You don't want to, like, get into it? I'm joking.

24 MR. DUNCANSON: That's dangerous territory for me, Madam
25 Chair.

1 CHAIR PENNEY: Okay. Well, then we can release your
2 witnesses, and I would suggest we take an hour for
3 lunch.

4 Will that be adequate time for you to
5 prepare for your final?

6 MR. DUNCANSON: Yes, certainly. I mean, I'm in your
7 hands in terms of how you want to proceed, Madam
8 Chair. I could go right away. I don't intend to
9 be very long with my closing remarks, just so
10 you're aware. It will be likely less than
11 10 minutes.

12 CHAIR PENNEY: Okay.

13 MR. DUNCANSON: But subject to questions that you have,
14 et cetera, I could go now or I could go after the
15 break.

16 CHAIR PENNEY: Okay. Yeah. So we will have a couple of
17 questions for you. So even if you make your final
18 remarks really short, we still have questions.

19 So you are released, and we'll see you in an
20 hour, which is around, I think, 5 after 1. So
21 thanks very much.

22 **(PROCEEDINGS ADJOURNED AT 12:06 P.M.)**

23 **(PROCEEDINGS RECONVENED AT 1:06 P.M.)**

24 CHAIR PENNEY: Okay. Welcome back. Hopefully nobody
25 had to go outside.

1 So, Mr. Duncanson, I've already indicated
2 that we're going to have some questions for you,
3 but do go ahead.

4 **SUBMISSIONS BY MR. DUNCANSON**

5 MR. DUNCANSON: Thank you, Madam Chair.

6 For the benefit of the court reporter,
7 again, my name is Sander Duncanson, and I'm counsel
8 for Trans Mountain.

9 Commissioners, there's been a lot of
10 technical information provided in support of the
11 application, not only in the application itself but
12 also the responses to information requests leading
13 up to today and over the course of questioning this
14 morning. I do not intend to walk through the
15 details of the evidence with you. I will leave it
16 to the engineers to speak about things like stress
17 calculations and Charpy tests. Instead, I intend
18 just to take a few minutes to summarize the key
19 reasons why Trans Mountain submits the application
20 is in the public interest and should be approved by
21 the Commission as soon as reasonably possible.

22 First, we appreciate that the issues with
23 the Mountain 3 crossing have evolved over the
24 course of the previous application that was filed
25 last October through to today. On November 22nd of

1 application and IR responses, it has explained in
2 detail why proceeding with the 48-inch ream poses
3 an unacceptably high risk. Trans Mountain has
4 explained that the requested variance of installing
5 NPS 30 pipe through the existing borehole can be
6 implemented without any further drilling, thereby
7 avoiding the risks associated with additional
8 reaming.

9 Trans Mountain's response to IR 1.2 shows
10 that the variance has a high likelihood of
11 succeeding because the borehole already exists and
12 there are no risks associated with the borehole
13 itself that are expected to have a detrimental
14 effect on pullback for the NPS 30 pipe. The pipe
15 is also already on site, ready for pullback, so the
16 variance would be executed almost immediately
17 following approval by the Commission, and it would
18 likely be successful in completing the Mountain 3
19 crossing without any material delay to the project.

20 Trans Mountain confirmed in the application
21 that installing NPS 30 pipe through Mountain 3
22 instead of NPS 36 pipe will not impact the capacity
23 of the expanded Trans Mountain system. The
24 Commission accepted that evidence in its December
25 20th decision regarding Trans Mountain's prior

1 variance request.

2 As Trans Mountain explained in detail in its
3 response to IR 2.1, which was filed yesterday, the
4 design of the installation, accounting for the
5 profile and diameters of the existing borehole, is
6 well within code requirements. There is nothing
7 unique about the proposed installation in terms of
8 pipe integrity.

9 Trans Mountain has also demonstrated through
10 the application and its responses to IRs 1.5, 1.6,
11 1.7, and 1.8 that it has ensured the quality of the
12 materials to be used for the variance in accordance
13 with both the code requirements and those of Trans
14 Mountain for the project.

15 In terms of the inspection process that was
16 followed to verify the quality of the materials, we
17 heard from Mr. Brown this morning that the process
18 that was followed was at the highest level of
19 inspection standards for industry. And like all
20 other sections of pipe for the project, the
21 integrity of the pipe will be validated prior to
22 line fill, including through hydrostatic testing
23 and a caliper tool run, and it will be further
24 validated through various inline inspections
25 following commencement of service. Trans Mountain

1 has made clear commitments on the record to conduct
2 those ILI runs for the Mountain 3 crossing much
3 sooner, even, than the deadlines required by
4 Condition 143 of the certificate.

5 Finally, Trans Mountain has explained that
6 the variance will not result in any change to the
7 environmental or socioeconomic effects of the
8 project or any change to the effects on rights of
9 Indigenous peoples.

10 For all of these reasons, Commissioners, we
11 submit that approval of the proposed variance is in
12 the public interest. It is critically needed to
13 allow Trans Mountain to complete the project
14 without risking years of delay and, consequently,
15 billions of dollars in commercial impacts. Trans
16 Mountain has demonstrated that the variance can be
17 implemented to the same safety and integrity
18 standards as the rest of the project and without
19 affecting capacity on the expanded system.

20 And, Commissioners, it's important to
21 recognize the Mountain 3 installation is now on the
22 project's critical path. Every day of delay in
23 this installation will likely delay the ultimate
24 in-service date for the project. Every week of
25 delay in in-service will cost Trans Mountain alone

1 Mountain, I would like to express our appreciation
2 for the time and resources that have been dedicated
3 to this application by the CER over the past month
4 when we know that all of you have had a lot on your
5 plates both professionally and personally. Thank
6 you to everyone at the CER who has assisted in
7 getting us to this hearing today and for your
8 attention to this critical application for the
9 TMEP.

10 That concludes my submissions,
11 Commissioners, subject to any questions you have.

12 CHAIR PENNEY: Mr. Duncanson, I don't even think you
13 were 10 minutes.

14 Okay. We do have a number of questions.
15 Commissioner Grimoldby.

16 MS. GRIMOLDBY: Thank you, Commissioner Penney.

17 **QUESTIONS BY THE COMMISSION**

18 MS. GRIMOLDBY: Mr. Duncanson, thank you for joining us
19 here today and thank you for your acknowledgment
20 just now. It's a busy time for everyone, and we're
21 very grateful and happy to be here with all of you.

22 I have -- I have some questions on the
23 January 11 IR response to CER IR 2.3. I'll then
24 pass the microphone over to Commissioner Penney,
25 who may have some questions for you, and then the

1 microphone may come back to me at the end, so we'll
2 play a little bit of -- a little bit of tag on
3 that.

4 But my questions on the January 11 IR
5 response of Trans Mountain's to IR 2.3 are -- are
6 going to be shared with you now. And I'm looking
7 at hard-copy page 11 of that IR response.

8 Edith, why don't we turn up, please, page 11
9 of that response to the CER IRs, January 11.

10 So you will be familiar with your
11 submissions here, but I'll just pull them up so
12 that we have, you know, an easy visual reference
13 here. And I'm looking at the very last paragraph
14 up on the screen. That's the paragraph I have some
15 questions about, and specifically the part that
16 reads: (as read)

17 Trans Mountain believes that the
18 Commission's proposed condition
19 would be precedent-setting, both
20 as a regulatory condition and in
21 the underlying premise that
22 companies should not be able to
23 rely on MTRs.

24 So in terms of -- I just want to test the
25 precedent-setting submission there. Isn't this a

1 rather fact-specific scenario with relatively low
2 precedential value?

3 MR. DUNCANSON: Thank you for the question, Commissioner
4 Grimoldby.

5 I think the point is, based on the evidence,
6 that it is industry standard practice to rely on
7 MTRs where MTRs exist and unless there's some
8 reason to doubt the accuracy of them. And the
9 suggestion that companies should not rely on what
10 the MTRs say and should take further steps to
11 independently validate the content of the MTRs is
12 novel and would be a precedent-setting suggestion.

13 Certainly, in terms of a regulatory
14 condition, you're right. I mean, it's up to the
15 Commission to decide what conditions to impose at
16 the end of the day based on the facts that are
17 before it. But the implication in this that it is
18 not sufficient for companies to rely on MTRs in
19 circumstances like this is, based on the evidence,
20 precedent setting.

21 MS. GRIMOLDBY: Right. And I don't know that you have
22 acceptance of that underlying premise here, but
23 it's just good to get more clear a little bit on --
24 of some of the more detail that you've provided on
25 the precedent-setting argument that you're -- that

1 you've contained in your IR response. And there's
2 concern about conditions, of course, that comes out
3 in the response in that paragraph specifically. We
4 hear this routinely. This is not something new for
5 us.

6 Aren't opportunities given routinely via
7 floated conditions or other opportunities for
8 comments on proposed conditions, and aren't those
9 opportunities sufficient for companies to ensure
10 their views on conditions are considered?

11 MR. DUNCANSON: I'm not sure I understand the question.
12 I mean, certainly, Commissioner Grimoldby, we
13 appreciate when draft conditions are floated for
14 comment. My view, anyways, is that's procedurally
15 appropriate and ensures that there's no concerns
16 with procedural fairness if this type of condition
17 were to be imposed.

18 So there's -- we're not making any
19 procedural argument here that it would be
20 inappropriate procedurally for the Commission to
21 impose these conditions. Our submissions are that,
22 based on the evidence, this condition, as worded,
23 is not warranted.

24 MS. GRIMOLDBY: Right. And so you recognize that there
25 are opportunities that are sort of provided through

1 floating, through those types of mechanisms, but I
2 think you've just stated your position, and I think
3 that's clear to me, at least on that question. So
4 thank you.

5 I will now turn you over to the capable
6 hands of Commissioner Penney.

7 CHAIR PENNEY: Okay. Thank you, Mr. Duncanson.

8 So, Edith, I'm looking at -- I am -- I think
9 we lined it up. It's the application from December
10 14th.

11 And, Mr. Duncanson, I'm going to refer to
12 two attachments to the application, one which is
13 the design change notice. There's no PDF pages on
14 mine. So my apologies. Appendix B, and it is the
15 Design Change Notice, which is nine pages in.
16 Appendix B. Of course, we ask everyone to give the
17 document number and the PDF page and then we, as a
18 panel, we don't do it. So my apologies. It's
19 Appendix B, Design Change Notice. So it's page --
20 would be page 9.

21 MR. DUNCANSON: I think -- Ms. Pritchard, if it helps, I
22 think it's just a little bit further down on that,
23 in the document.

24 CHAIR PENNEY: Thank you.

25 There it is. Okay. And just keep going.

1 Okay. Stop.

2 And these were appendices that came in the
3 package as undertakings in the first application.
4 And I'm just going to point out that the signatures
5 on this Design Change Notice are November 27th
6 through November 29th.

7 And then the next thing I want to -- you to
8 go to - it's a number of pages down - it said,
9 "Vendor List Deviation Request Form." Keep going.
10 Yeah, it's after all these lovely spreadsheets.
11 There. Okay. Go down to the bottom.

12 And then you'll see here, Mr. Duncanson,
13 again, the signatures are all November 28th through
14 the 29th.

15 And then there's one other document. I
16 don't have it in front of me here, but was signed
17 on December 30th. And I can't remember which one
18 it was, but it was also in the package that came in
19 for the -- with the IRs.

20 And so all I'm -- I guess I'm looking for a
21 reasonable explanation. You can see how difficult
22 a situation this puts us in to see things signed
23 after the fact that we would have expected to have
24 been done pursuant to the quality management system
25 that you have in place.

1 MR. DUNCANSON: Yes, certainly. I -- I'm glad that you
2 asked the question, Madam Chair, because I
3 certainly read your concerns in the previous
4 variance decision, and I think if I were in your
5 shoes, without understanding all of the backstory,
6 I think I would -- I would have similar concerns.

7 What we heard from the experts this morning,
8 and based on the evidence that's before you, is
9 when a project like this is actually being
10 executed, the documentation doesn't always happen
11 in real time. So there are inspection results that
12 are generated basically in real time as materials
13 are being inspected. Those results are provided to
14 the engineer of record and the right people to
15 verify that the inspections have been done and that
16 the results are satisfactory. That work happens
17 afterwards. There is then the formal documentation
18 that essentially just confirms what was done.

19 And I think there's a few different
20 instances of it. You've got this Design Change
21 Notice here. I think some of the written
22 inspection reports that we were looking at earlier
23 are other examples of essentially the same thing
24 happening. But that's what the evidence shows is
25 the work is done but the documentation sometimes

1 lags, at least in terms of the final documentation
2 with all the signatures.

3 I can appreciate that if you didn't have the
4 benefit of hearing directly from the experts to get
5 the assurance that the right things were done, it
6 might be difficult for you as a decisionmaker to
7 have comfort that those things did in fact happen,
8 but we did hear from the experts that the right
9 work was done. It was reviewed at the time, not
10 these dates, but it was reviewed when the
11 inspections actually happened to make sure that the
12 materials were fit for purpose, and this
13 documentation that you see is more of an
14 after-the-fact sort of papering of -- of what
15 happened, and that's why those dates came later.

16 CHAIR PENNEY: Okay. Thank you, Mr. Duncanson. And
17 yes, we did hear from the experts this morning.

18 Back to you, Commissioner Grimoldby.

19 MS. GRIMOLDBY: Thank you, Commissioner Penney.

20 My last question is sort of a -- encourages
21 us to sort of have a quick back-and-forth about a
22 broader overview of -- of what's -- what's
23 happening here.

24 This is a project that was originally
25 applied for in 2013, subject to a multiyear, highly

1 contested public hearing process, concluding with
2 the present certificate's issuance in 2019 at the
3 conclusion of the second public hearing. There
4 have also been at least three related, I believe,
5 Federal Court of Appeal decisions regarding - and
6 you can correct me if I'm wrong - the project's
7 approval process.

8 We have scores of detail: Route hearings
9 and decisions; associated statements of opposition
10 received, later withdrawn; we have several
11 deviation and variance requests, over 250 condition
12 and compliance letter of reports, about a dozen
13 Leave to Open applications; and then we have the
14 NEB, our predecessor, in 2019 again imposing a
15 broad range of conditions on the project, including
16 Condition 9, in relation to the quality management
17 program, the QMP that has been discussed here.
18 Also swirling around as important context in the
19 current scenario are an imminent project in-service
20 date in mere months, the entire project nearly
21 complete; back-to-back variance applications
22 dealing with new pipe and launcher/receiver
23 materials that were purchased in a manner different
24 than for the rest of the project; possible relief
25 request from Condition 9; questions about whether

1 Trans Mountain, in this instance, has followed its
2 own procedures.

3 I could go on, but with all of that
4 background, I'm hoping you can help me understand
5 something: With all of this and all of the work
6 that has gone on over the past 10-years plus on
7 this project, with all of the vetting, all of the
8 contingency plans to plan for evolving scenarios,
9 as you noted, all of the checks and balances, all
10 of the checks on the checks and balances, how did
11 we get here today with you all here and yet another
12 variance application here before us?

13 MR. DUNCANSON: That's a great question. I think,
14 Commissioner Grimoldby, you've provided a good
15 summary of the last 10 years of my experience on
16 the project.

17 MS. GRIMOLDBY: Inadvertently, I'm sure, and you could
18 do better. I have no doubt.

19 MR. DUNCANSON: I think that the best way to answer that
20 is, this has been a very challenging, complex
21 project. And when you look at particular sections
22 of this project, including the vicinity of Mountain
23 3, you're dealing with a number of constraints.
24 And, you know, one of the IR responses talks about
25 the fact that the existing Line 1 for the Trans

1 Mountain pipeline is essentially right beside a
2 railway, right beside the highway, right beside a
3 river, and then there's a mountain right beside it.

4 And when the -- when the -- as you know,
5 when the certificate hearing happens, there has not
6 been significant work done to figure out exactly
7 where the pipe is going to go. It's really just a
8 matter of what does the corridor look like at that
9 time? And when you actually get to a place like
10 this and you see all the constraints, Trans
11 Mountain determined several years ago there's
12 really nowhere to go here except through the
13 mountain, and that's, in itself, a very challenging
14 undertaking.

15 And then as I think we've seen in several
16 places on the project, when you execute in a
17 technically challenging environment, sometimes
18 things that are unforeseen happen. And in this
19 case, you've got a very long crossing. I mean,
20 this is a 2.3-kilometre drill - that's very, very
21 long - through hard rock. So right away, that's --
22 that's challenging.

23 Even notwithstanding that, the experience
24 with the equipment drilling through was more
25 challenging than expected, and you saw that in the

1 IR responses. And then there was this whole issue
2 of water, which at this point -- I mean, I spoke to
3 it in my closing remarks. There's been a bit of an
4 evolution here. The water issue was always known
5 to be an issue. It was not understood to be such a
6 significant issue until more recently.

7 And so unforeseen things have happened, and
8 Trans Mountain, as has happened through the life of
9 this project, has to deal with the new information
10 when it comes in. And when you're executing a
11 project that's 1,000 kilometres long and has all
12 these challenging technical areas along it, there's
13 just this constant iterative process of let's solve
14 the next problem. I'm cautiously optimistic this
15 is the last one.

16 MS. GRIMOLDBY: Good for you for your optimism. Thank
17 you for the answer. That is all from me. Thanks.

18 CHAIR PENNEY: Okay. Mr. Duncanson, I think you got off
19 easy. Thanks for that. Those are our questions.

20 MR. DUNCANSON: Madam Chair, just before we close, would
21 I be able to just confer with my client quickly and
22 make sure that there is nothing I left out or --

23 CHAIR PENNEY: Yes.

24 MR. DUNCANSON: -- inadvertently said wrong. Thank you.

25 All right. Looks like we're good. Thank

1 you, Madam Chair.

2 CHAIR PENNEY: Thank you, Mr. Duncanson.

3 Okay. So that concludes all the procedural
4 steps in this proceeding. I officially declare the
5 record closed, no undertakings, and on behalf of my
6 colleagues, I would like to thank everyone who came
7 out. It's an extraordinary weather day here, so we
8 really appreciated that you were able to sit a full
9 panel. I really appreciate everyone coming out in
10 minus 40 and the work that you put into things over
11 Christmas. It was hard on everyone, I'm sure.

12 We will issue our decision in due course
13 once we've fully considered all of our submissions.

14 So take care, be safe, and keep warm.

15 Thanks very much.

16 **(PROCEEDINGS CONCLUDED AT 1:31 P.M.)**

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1 CERTIFICATE OF TRANSCRIPT

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3 I, the undersigned, hereby certify that the
4 foregoing pages are a complete and accurate transcript
5 of the proceedings taken down by me in shorthand and
6 transcribed from my shorthand notes to the best of my
7 skill and ability.

8 Dated at the City of Edmonton, Province of Alberta,
9 this 12th day of January, 2024.

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14 Joanne Lawrence, RPR, CSR(A)
15 Court Reporter
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