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NATURAL RESOURCES CONSERVATION BOARD

Application No. 1701

SPRINGBANK OFF-STREAM RESERVOIR PROJECT

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P R O C E E D I N G S

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Volume 4

March 25, 2021

(Via videoconferencing)

1 Natural Resources Conservation Board Proceedings taken  
2 virtually in Calgary and Edmonton, Alberta.

3

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4 Volume 4

5 March 25, 2021

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Daniel Heaney	Commission Member

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11

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Melissa Senek	For City of Calgary
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21

22

L. Douglas Rae	For Stoney Nakoda Nation
Sara Loudon	

23

24

25

1 Richard Secord For SR1 Concerned Landowners  
Ifeoma Okoye Group

2

3 Bob Williams For Calalta Amusements Ltd.  
and Calalta Waterworks Ltd.

4

5 Scott Wagner For Scott Wagner

6

7 Lorelee Vespa CSR(A) CRR RPR Official Court Reporters  
Deanna DiPaolo, CSR(A)

8

9 (PROCEEDINGS COMMENCED AT 8:30 A.M.)

10 THE CHAIR: Good morning, everyone. We left  
11 off yesterday actually completed with Transportation  
12 and cross, and we're ready for Stoney Nakoda's direct  
13 this morning.

14 Before we get started, any prelim matters or  
15 housekeeping?

16 MS. SENEK: Good morning, Mr. Chair. It's  
17 Melissa Senek from the City.

18 The City of Calgary sent an undertaking response  
19 to Mr. Rae and Ms. Friend respecting our undertaking  
20 about the government of Alberta and TransAlta  
21 agreement. And we sent that yesterday afternoon. So  
22 my understanding, our undertakings are now complete.

23 THE CHAIR: Thank you. And was that sent to  
24 the Board as well?

25 MS. SENEK: It was sent to Ms. Friend, yes.

THE CHAIR: It was. Okay.

1 MS. SENEK: I don't think they meant it as an  
2 exhibit, though. And I do realize that I didn't copy  
3 Ms. Louden on that, so I can forward that to her as  
4 well.

5 MS. LOUDEN: I have received it through  
6 Mr. Rae. Thank you.

7 MS. SENEK: Perfect. Thank you.

8 MS. FRIEND: And this is Laura. I have entered  
9 it as Exhibit 363. So it is on the website.

10 THE CHAIR: And it's already posted? Okay,  
11 thank you, Ms. Friend.

12 So 363. Did I hear that right?

13 MS. FRIEND: Yes, that's correct.

14 THE CHAIR: Okay. Thank you, Ms. Senek.

15 **EXHIBIT 363 - CITY OF CALGARY**  
16 **UNDERTAKING RESPONSE RE GOVERNMENT OF**  
17 **ALBERTA AND TRANSALTA AGREEMENT**

18 THE CHAIR: Anything else?

19 Okay, Ms. Louden, you've got around two hours and  
20 40 minutes, I believe, is the requested and approved,  
21 so that'll take us through a good part of the morning  
22 for sure, but we'll likely have a break. I'll try to  
23 get a break in there somewhere if it's sort of a  
24 natural spot, but we'll just sort of play that by ear,  
25 but for now, then, the floor is yours. And welcome.

1 MS. LOUDEN: Thank you, sir, and good morning.

2 The Stoney Nakoda witness panel today for Topic 2  
3 includes members of the distinct nations of Bearspaw,  
4 Chiniki, and Wesley First Nation; namely,  
5 Mr. William Snow, Elder Jackson Wesley,  
6 Elder Henry Holloway, Elder John Snow, Jr.,  
7 Larry Daniels, Jr., and Chris Goodstoney.

8 Also sitting on the panel this morning is  
9 Ms. Megan Berry. She's an archeologist contracted by  
10 the Stoney Nakoda Nations as part of their review of  
11 the S -- sorry, as part of their review of the SR1  
12 project application.

13 So, this morning, Elder Jackson Wesley will be  
14 performing a prayer with each of the Stoney Nakoda  
15 witnesses which serve as their affirmation this  
16 morning.

17 So, in particular, the prayer will serve as  
18 affirmation for Elder Jackson Wesley himself,  
19 William Snow, Elder Henry Holloway, Elder John Snow,  
20 Jr., Larry Daniels, Jr., and Chris Goodstoney.

21 After Elder Jackson has performed the prayer to  
22 affirm those witnesses, I suggest that, at that time,  
23 the court reporter swear or affirm Ms. Megan Berry.

24 So, at this time, I will turn to Elder Wesley and  
25 suggest that now is the time for him to perform the

1 prayer.

2 Sorry, I'm just looking.

3 ELDER WESLEY: Good morning. Can you hear me?

4 Sorry about that. My name is Jackson Wesley --

5 THE CHAIR: Excuse me, excuse me. Sorry to  
6 interrupt, our court reporter is having difficulty  
7 hearing you. Is it possible maybe for you to speak up?  
8 We want to get this on the record so that we --

9 Ms. DiPaolo, can you just give us maybe a quick  
10 check.

11 ELDER WESLEY: Good morning. Hello? Good  
12 morning.

13 THE CHAIR: That's much better. Thank you.

14 ELDER WESLEY: Sorry about that. My name is  
15 Jackson Wesley. I'm a Stoney First Nation.

16 And every time we do something like a ceremony or  
17 a gathering, we always do the opening prayer first for  
18 Creator first. We pray and, at the end, we always say  
19 a closing prayer too. So we hopefully do that at the  
20 end, so somebody can do that.

21 So I'm going to say a prayer in my language, so  
22 please bear with me and help me.

23 (OTHER LANGUAGE SPOKEN)

24 ELDER WESLEY: Amen. Thank you. Thank you.

25 MS. LOUDEN: Thank you, Wesley.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1                   So now I would suggest would be an appropriate  
2                   time for the court reporter to swear or affirm  
3                   Ms. Megan Berry. Sorry.

4           THE CHAIR:                   Yes.

5

6           W. SNOW, J. WESLEY, H. HOLLOWAY, J. SNOW JR.,

7           L. DANIELS JR., C. GOODSTONEY, M. BERRY (For Stoney Nakoda  
8           Nations), affirmed through prayer/affirmed

9           MS. LOUDEN EXAMINES THE PANEL:

10          Q. Thank you. Now, I'll just briefly introduce  
11               Ms. Megan Berry and ask her to confirm her credentials,  
12               and then I'll turn it over to Mr. William Snow who will  
13               introduce himself and the other Stoney Nakoda  
14               witnesses.

15               Ms. Berry, your CV is on the record as  
16               Exhibit 343. Can you confirm that your CV is accurate?

17          A.   MS. BERRY:                   Yes.

18          Q. And can you confirm that you were contracted by the  
19               Stoney Nakoda Nation to do archeological and cultural  
20               heritage assessments relating to the SR1 project  
21               application?

22          A.   MS. BERRY:                   Yes.

23          Q. Can you provide a brief summary of your education and  
24               experience?

25          A.   MS. BERRY:                   Yes, I'm an archeologist and a

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 cultural heritage manager. I have worked in the  
2 heritage field professionally since 2010.

3 I received my PhD in archeology from the  
4 University of Western Australia in 2018 and my masters  
5 in cultural and environmental heritage from the  
6 Australian National University in 2011.

7 I also hold a bachelor of fine arts from the  
8 University of Lethbridge, which I was awarded in 2007.

9 I'm a permit-holding archeologist in Alberta, and  
10 I have undertaken historic resource impact assessments  
11 for industry and development projects, and I have  
12 supported traditional land use and knowledge surveys  
13 and studies.

14 Most recently, I was privileged to be part of the  
15 Writing-on-Stone, Aisinai'pi, UNESCO World Heritage  
16 Nomination Team and support the management of heritage  
17 sites within Aisinai'pi.

18 I'm currently an archeological and cultural  
19 heritage consultant.

20 Q. And can you explain briefly what your role was in  
21 helping the Stoney Nakoda prepare evidence regarding  
22 the SR1 project?

23 A. MS. BERRY: Yes. I supported and co-authored  
24 the Stoney Nakoda interim traditional land use reports,  
25 and I also supported the Stoney Nakoda response to the



## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1           **EIS.**

2           Q.    Thanks, Ms. Berry.

3                         Mr. William Snow, can I ask you to confirm that  
4           you are the consultation manager for Stoney tribal  
5           administration?

6           A.    **MR. W. SNOW:**           **Yes, I am.**

7           Q.    And can you confirm that the evidence of the Stoney  
8           Nakoda Nations in this hearing was prepared by you or  
9           under your direction and control?

10          A.    **MR. W. SNOW:**           **Yes, I can confirm that.**

11          Q.    And do you, therefore, adopt this evidence on behalf of  
12          the Bearspaw First Nation, Chiniki First Nation,  
13          Wesley First Nation, as well as the wholly-owned  
14          company Woste Igitic Nabi Ltd.?

15          A.    **MR. W. SNOW:**           **Yes, I can confirm.**

16          Q.    Thank you, Mr. Snow. I will now turn it over to you to  
17          introduce yourself, as well as the other Stoney Nakoda  
18          witnesses, and then we can begin the direct evidence of  
19          this panel?

20          A.    **MR. W. SNOW:**           **Thank you, Sara. Good morning to  
21          the Chair and Panel of the NRCB.**

22                         **Good day, this -- my name is William Snow. I'm  
23          the consultation manager for Stoney Nakoda Nation, and  
24          I am a Wesley band member. And I want to thank the  
25          Board. I want to thank the Elder Jackson Wesley for**

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 beginning our prayer today to start us off in a good  
2 way. And I want to thank the Board for recognizing  
3 Stoney Nakoda Nation and allowing for our time here to  
4 speak today.

5 I have been in this role of consultation manager  
6 since 2012. I'm a graduate of the University of  
7 Lethbridge in business administration and also attended  
8 post-secondary courses at Mount Royal College.

9 I am -- have been in this role since 2012, as I  
10 said, and I am coordinating many of the provincial  
11 industry and federal projects on Crown lands within  
12 Stoney traditional territory, and have been doing this  
13 with a team of someone from our -- taking part in our  
14 presentation today.

15 I will introduce some of the speakers as we go  
16 prior to their speaking. But for now, I would like to  
17 begin with my own presentation here to get us  
18 started -- started off.

19 There's also -- would also like to mention that I  
20 attended Springbank high school, along with many of my  
21 brothers and sisters in the 1980s and '90s and have --  
22 have connections in the community over many years.

23 Today, I will be speaking about the opposition  
24 that Stoney Nakoda Nation has to the SR1 project.  
25 First, I will speak about the misunderstanding of

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 Treaty rights; and then I will turn to the incomplete  
2 interim cultural assessment reports; I will also  
3 comment briefly on the disrespectful treatment of  
4 Alberta Transportation during the fieldwork; and I will  
5 also then talk about the cultural importance of  
6 wildlife; and then I will talk about the -- some of the  
7 misunderstandings about the capacity for this project  
8 for Stoney Nakoda Nation; and then I will conclude with  
9 some comments around the impact of COVID-19 on  
10 Stoney Nakoda Nation.

11 As signatories to Treaty 7, the understanding of  
12 Treaty rights by First Nations and by government  
13 differs greatly. These differences should well --  
14 should be well understood, especially for projects like  
15 Springbank dam.

16 These differences include Indigenous and western  
17 cultural differences in language and communication, and  
18 differences for the purpose of the Treaty. To  
19 illustrate some of these differences, I have present --  
20 I will be speaking on portions of the book, "These  
21 Mountains are Sacred Places" by Chief John Snow.

22 Regarding Indigenous and western cultural  
23 differences on page 39, Snow states: (as read)

24 The cultural misunderstanding  
25 surrounding the Treaties were very deep

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1           and very serious, indeed. During the  
2           Treaty making, two parties representing  
3           two significantly different cultures  
4           attested their signatures: One was my  
5           people who had an oral tradition and  
6           history. Under North American Indian  
7           law, whatever words were spoken and oral  
8           promises given during the formal  
9           negotiations were remembered and were  
10          legally binding. The other party was  
11          the federal government representing the  
12          Queen of England. Under their system,  
13          only the written word in black and white  
14          was the law."

15          Regarding language and communication, another quote  
16          begins: (as read)

17                 "The Treaty commissioners performed  
18                 their assigned tasks, oftentimes unaware  
19                 of the full meaning of Aboriginal law  
20                 and title, without knowledge of our  
21                 language, without the benefit of the  
22                 most elementary background as to our  
23                 history, culture, and way of life.

24                         Many of our present-day problems  
25                         derive from the consequent confusion,

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1           misunderstanding, and apprehensions  
2           which surround the signing of the  
3           Treaties."

4           Another quote begins: (as read)

5           "Common justice and common sense  
6           suggests that both North America Indian  
7           law and British law should have been  
8           binding in the Treaties. Yet, I'm sure  
9           that the government representatives and  
10          the negotiation -- at the negotiations  
11          were well aware that, in the future,  
12          only the written statements contained in  
13          the documents would be honoured and  
14          upheld by the courts if there were any  
15          disputes.

16                 This is now true. Only a narrow  
17                 and literal interpretation of the  
18                 Treaties, in most cases, is upheld in  
19                 court today.

20                 But my people who had an oral  
21                 traditional and had honoured verbal  
22                 agreements in the past thought that the  
23                 government would also honour what was  
24                 spoken during Treaty making."

25           Closed quote.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1           Regarding the purpose of the Treaty, another quote  
2 begins: (as read)

3           "Another basic misunderstanding at the  
4 negotiations concerned the purpose of  
5 the treaties. The federal government  
6 wanted legal title to the entire  
7 Northwest Territories so that they could  
8 be developed by the white men, and the  
9 Treaties were a natural outgrowth of  
10 federal policy. We, on the other hand,  
11 understood them to be strictly peace  
12 Treaties. Given the difficulties in  
13 translation and the different cultural  
14 attitudes towards the use of ownership  
15 of land, our forefathers did not realize  
16 that they were seeding land to white men  
17 for all time. The question of  
18 restricted land and the number of acres  
19 per family never came up until the  
20 coming of the surveyors and railways  
21 with the subsequent flood of ranchers  
22 and settlers."

23 Closed quote.

24           These give some background -- these quotes give  
25 some background as to our understanding of Treaty.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1           Yesterday we had some discussion of Treaty rights,  
2           so I thought it would be important to understand that  
3           there are two different perspectives when it comes to  
4           Treaty rights.

5           Another quote from -- from the book begins:

6           (as read)

7           "It seems that some of this  
8           misunderstanding was intentionally  
9           allowed by the government because it was  
10          to its advantage to extinguish title to  
11          Indian land as quickly as possible. By  
12          creating a legal situation in which it  
13          could soon send out surveyors to make  
14          legislation stating that there must be  
15          legal land descriptions and titles to  
16          the land, the government set its own  
17          stage for control of our land and  
18          resources. The government kept these  
19          papers in its office, and, therefore,  
20          controlled the land. My people had very  
21          little say, if any at all, about the  
22          land after the Treaties were signed."

23          The misunderstanding of Treaty and the protection of  
24          Treaty rights is in the heart of this SR1 project.

25          The taking up of land by this proposed dam will

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 impact lands where my ancestors have camped, hunted,  
2 gathered, fished, and trapped, as well as other  
3 activities since time immemorial.

4 The interim cultural assessment report created for  
5 this hearing was incomplete and does not discuss all of  
6 the impacts to the Stoney -- Stoney Nakoda Nation Treaty  
7 and Aboriginal rights in the proposed project area.

8 With regards to the incomplete interim cultural  
9 assessment report, Stoney consultation completed an  
10 interim report for this hearing.

11 Over the years, Stoney has conducted fieldwork  
12 where we have been able to conduct it in such a way  
13 where we address our cultural concerns regarding  
14 landscapes. For example, our elders and consultation  
15 officers were not able to travel to all the areas that  
16 they wanted to see during the fieldwork. Fieldwork had  
17 to be conducted by a group and travelling around in an  
18 area -- travel by an individual was not allowed.

19 In terms of consultation fieldwork for many other  
20 projects, this type of restriction was never in place.

21 During the course of fieldwork for many other  
22 projects, we have had access as groups, as individuals,  
23 to go out to many places for our consultation work over  
24 the years, and this is the one time where we were --  
25 where we had this type of restriction to only travel in



## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 groups.

2 One important part of the cultural assessment  
3 process is to conduct -- is the conduct of an elder's  
4 meeting after the fieldwork is complete. This elder's  
5 meeting should have taken place to recap the findings of  
6 the field works and then these comments would have been  
7 incorporated into our final report.

8 This whole piece of the report was not conducted  
9 properly. We were rushed in order to comply with this  
10 NRCB filing deadline. We were rushed because of the  
11 incidents that happened during the fieldwork. We never  
12 had resolution on those items, and we'll speak a little  
13 bit more to those comments later.

14 The -- the cultural assessment report concluded 13  
15 recommendations that focused mainly on mitigations for  
16 archeology, wildlife, and cultural monitoring.

17 Having culturally appropriate protocols in place  
18 for the project is important should the project be  
19 approved.

20 I would note to the Board that within the current  
21 *First Nations Sacred Ceremonial Objects and Repatriation*  
22 *Act*, there is no regulation concerning artifacts for  
23 Stoney Nakoda Nation.

24 I would also note that Stoney Nakoda Nation has  
25 been involved in the repatriation of human remains on

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 Crown land and private land in Alberta.

2 I would also note that there are no real  
3 protections in place for Indigenous grave sites and  
4 cemeteries in Alberta.

5 Regarding the disrespectful treatment during the  
6 fieldwork, I will leave that portion to my colleagues,  
7 some of whom took part during that time out in the field  
8 and give you their -- their firsthand culture of their  
9 experiences at that time.

10 Turning to the cultural importance of wildlife. In  
11 2016, the Stoney Nakoda had the opportunity to conduct a  
12 study titled "Enhancing Grizzly Bear Management Programs  
13 Through the Inclusion of Cultural Monitoring and  
14 Traditional Ecological Knowledge." Through this study,  
15 the Stoney Nakoda were able to identify a culturally  
16 important species, that are grizzly bears, in a  
17 culturally important landscape, the Galatea region of  
18 Kananaskis, and offer some alternatives to understanding  
19 how grizzly bear behaviour -- understanding the  
20 foundations of grizzly bear behaviour and habitat.

21 The knowledge from this study was based on  
22 Stoney Nakoda traditional knowledge and oral history.  
23 This is the type of study that should have been afforded  
24 to Stoney Nakoda for the Springbank dam project area.

25 We have included a copy of the 2016 grizzly report

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 in our submissions.

2 Regarding project capacity in the Alberta  
3 Transportation responses, there was discussion about the  
4 funding amounts that were identified as being available  
5 for Stoney Nakoda Nation to conduct studies in the  
6 project area.

7 What is absent from this explanation is that,  
8 regarding federal funding, much of this funding was only  
9 accessed in December 2020. Prior to this time, project  
10 funding was only available on a reimbursement basis.

11 As a First Nations government department,  
12 Stoney Nakoda does not have the ability to fund load  
13 funding for projects such as SR1. In other words,  
14 Stoney doesn't have a hundred thousand dollars in our  
15 bank account just waiting to take on expenses. We had  
16 no arrangements in order to access funding for this kind  
17 of project prior to December 2020.

18 I would also note that overall consultation funding  
19 for Stoney consultation decreased from 2020 to the 2023  
20 term.

21 The impact of COVID-19 on Stoney Nakoda Nation has  
22 been severe.

23 For Stoney Nakoda Nation, the first state of local  
24 emergency began on March 17th, 2020, and was in effect  
25 until June 19th, 2020. The second state of local

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 emergency began on January 11th, 2021, and is still in  
2 effect.

3 Also, since March 20 -- March 10th, 2021, there has  
4 been a curfew in place for the Stoney communities from  
5 12:00 a.m. to 6:00 a.m.

6 Additionally, the first consultation pause started  
7 on March 25th, 2020, and ended on April 21st, 2020, as  
8 well. The second consultation pause started on  
9 April 23rd, 2020, and is currently still in effect.

10 I would note that some of the archeological  
11 fieldwork for SR1 took place in July 2020. Given the  
12 state of local emergency, Stoney Nakoda Nation did not  
13 participate in this fieldwork due to ongoing COVID-19  
14 and other concerns.

15 The Stoney Nakoda communities at Bighorn, Morley,  
16 Rabbit Lake, and Eden Valley do not have -- do not have  
17 modern infrastructure, telecommunications, or  
18 facilitates of many non-Indigenous communities.

19 Housing shortages for families on reserve create  
20 crowded living conditions. These crowded living  
21 conditions can exacerbate the health issues presented by  
22 COVID-19.

23 In the AT responses, AT comments the abundance of  
24 time available to Stoney Nakoda Nation to meet and to be  
25 consulted on SR1, yet there was no mention of this --

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 the state of local emergency. Similarly, there is no  
2 mention of the consultation pauses that have been in  
3 effect and are still in effect.

4 In summary, the misunderstanding of Treaty rights,  
5 the incomplete interim cultural assessment report, the  
6 disrespectful treatment of Stoney Nakoda elders and  
7 officers during fieldwork, the incomplete assessment of  
8 culturally important wildlife, the lack of understanding  
9 of project capacity for First Nations, and the lack of  
10 understanding of the impact that COVID-19 has had on  
11 Stoney Nakoda Nations, these are issues that Alberta  
12 Transportation and its contractors have not consulted  
13 properly, nor meaningfully on this project.

14 The disregard of Indigenous historical issues,  
15 cultural issues, wildlife issues, health and safety  
16 issues, the disregard of these issues, that is the  
17 hallmark of a colonial system. For all these reasons,  
18 the NRCB should not approve this project.

19 Those are the -- those are my comments for today on  
20 the -- for this portion of the -- of the program.

21 THE CHAIR: Thank you, Mr. Snow.

22 Q. MS. LOUDEN: Thank you, Mr. Snow.

23 And I believe Elder Jackson Wesley will be  
24 providing his comments next.

25 A. MR. W. SNOW: Yes. So Elder Jackson is an elder

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 with the Bearspaw community and is -- and also member  
2 of the larger Stoney Nakoda Nation.

3 Elder Jackson has taken part in many ceremonies on  
4 reserve and is a very much respected Elder within our  
5 communities, and we're pleased and happy to have him  
6 here today to speak to a few issues regarding the  
7 project area.

8 Elder Jackson, go ahead, any time.

9 A. ELDER WESLEY: Yeah, good morning again. My name  
10 is Jackson Wesley, Stoney First Nation.

11 Let me tell you about my grandfather. My great  
12 grandfather's name is Peter Wesley. He was a chief  
13 back in early 1800s, and my grandfather Moses Wesley  
14 was born in late 1800s, and my dad born in 1905.

15 So I've been told about this land, which -- about,  
16 like, graveyards and names and that's why people using  
17 me as a ceremonies and opening prayers and -- because  
18 our Creator put us here to take care of the land as  
19 First Nations.

20 If we do a ceremony -- we don't just like -- like,  
21 a party, you know, overnight, and tomorrow, we forget,  
22 we are not like that. Creator put us here to take care  
23 of our Mother Earth, and especially our medicine and  
24 our water.

25 I've been told about this trail, back in the

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 old -- old days, they used to travel through that -- on  
2 the Highway Number 8, travel a lot, and when the white  
3 people here, they use that trail as Calgary Stampede  
4 when the Stoney travel comes to Calgary Stampede, they  
5 use that trail.

6 Back in the early '40s, I believe, I heard this  
7 Stoney man, he was born in that trail along that -- I  
8 think right beside that Highway Number 8, close to that  
9 Petro -- I'm not really too sure -- but his name is  
10 Irvine Seemia (phonetic) back in the early '40's; and  
11 this woman was travelling around there, was pregnant,  
12 but still, she wants to travel. So even travel and --  
13 along that trail, she was in labour, so that's where  
14 they have a -- a labour, and they said it's a baby boy,  
15 and his name is Irvine Seemia -- that guy is passed  
16 away back in the 1990s. That's the kind of story I've  
17 been told in the old days.

18 We look after our medicine and our -- and the  
19 water and our -- along there, there's been animals  
20 around there. That's been -- if we did that on the  
21 Highway 8, we'd be scared that where these animals  
22 going to go, what's going to happen to our medicine --  
23 they won't grow back, you know. Once it's gone, it's  
24 gone.

25 This dam, I don't think that's a good idea, no.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1           There always the other way, if we look the other side  
2           the different ways. We always a different way, we can  
3           find the other situations like another dam that can  
4           take care of anything, like.

5           And since the COVID hit us, everything it's slow  
6           down. And now we lost some of our elders and -- but we  
7           keep our space strengths strong, especially our  
8           stories.

9           Along that trail, there's a lot of stories, I'm  
10          pretty sure, and there's a grave -- Stoney graves, I've  
11          been told about that. At least ten graves is there,  
12          Stoney graves, that's what I've been told. If we  
13          search and look at around there, we're pretty sure it's  
14          there, and that's what I've been told.

15          Then during the mid-summer, early spring, our  
16          Stoney people will travel to that areas there,  
17          gathering, pick berries, medicines, and sometimes they  
18          can grow their own medicines at -- at their house,  
19          that's where they're thinking about that to take it  
20          really carefully, but where the growing medicine, we  
21          can't cut. We have to leave that.

22          That's all I can say, because people use that  
23          travel -- trail on that Highway 40, and they really do  
24          have respect on that trail because animals, and  
25          especially the moose are -- there's other such travels



## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 for the animals too.

2 Sometimes if you travel on that highway, you can  
3 see the dead and deers, animals. If you see something  
4 dead on the highway, that kind of animal has got trails  
5 through across that land, and there's a lot of  
6 different animals' trails around this area. So we  
7 don't want to destroy that too because we respect the  
8 animals too. I heard they been disturbed, and when  
9 they're disturbed, they're going to the other people's  
10 houses.

11 And especially the bears, they can't do hunting  
12 anymore because there's lot of houses everywhere.  
13 There's no food anywhere, so they have to go to the  
14 garbage can. That's -- that's really hurts.

15 Thank you. And that's all I can see today. Thank  
16 you for having me. Thank you.

17 A. MR. W. SNOW: (OTHER LANGUAGE SPOKEN). Thank  
18 you, Elder Jackson.

19 THE CHAIR: Thank you, Elder Jackson. Just  
20 one minute, please. I think the court reporter's...

21 THE COURT REPORTER: I just didn't know who was  
22 speaking that last time.

23 THE CHAIR: Elder Jackson Wesley. And then I  
24 think Mr. Snow just -- he thanked as well, that's who  
25 was speaking last, sorry.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1       A.   MR. W. SNOW:            Thank you.   (OTHER LANGUAGE  
2       SPOKEN).

3                Next, I think our speaker, our next speaker is  
4       going to be Elder Henry Holloway.

5                Henry is a former chief, former councillor with  
6       the Chiniki First Nation. Elders have taken part in  
7       many groups and committees over the years for the  
8       Morley community, various communities in the Bow  
9       Valley, and in Calgary. Henry's family has been taking  
10      part in the Banff Indian Days and Calgary Stampede for  
11      many, many years.

12              Henry is a very important, respected elder in our  
13      community, and also took part in the fieldwork for --  
14      that took place back in 2016.

15              So he'll be speaking to -- to some of his  
16      experiences during that time.

17              Elder Henry, are you on?

18      A.   ELDER HOLLOWAY:        I'm on someplace.

19      A.   MR. W. SNOW:            (OTHER LANGUAGE SPOKEN)

20      A.   ELDER HOLLOWAY:        (OTHER LANGUAGE SPOKEN).

21              I'm Henry Holloway, and lived on this reserve for  
22      79 years, and I think I have a pretty good knowledge of  
23      our past oral history, passed down to me by my great  
24      grandfather.

25              And grandfather that I travelled with way back in

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1           1960, when I was 17 years old, I had the privilege of  
2           travelling with Chief Walking Buffalo. He was  
3           sponsored on the Goodwill Tour around the world.

4           We went through Vancouver, Hawaii, Fiji Islands,  
5           New Zealand, Australia, South Africa, Central Africa,  
6           Cairo.

7           And we went to Rome, the old ancient city of Rome;  
8           and we visit that place where the Vatican stands at the  
9           St. Peters Square. It was quite an experience.  
10          Walking Buffalo was 90 years old when I travelled with  
11          him. He was sponsored on the Goodwill Tour around the  
12          world.

13          So I have a little bit of knowledge on how the  
14          earth looks around the world, in different continents,  
15          in different countries.

16          But getting back to this Springbank project, to  
17          me, I think it's just a waste of time, waste of money  
18          by the government. Building a dam in the -- that  
19          hopefully we'll have another runoff flood, and there we  
20          are, we have the dam already set up for that.

21          And I've lived in here for 79 years, and that's  
22          the first time in 2013, the flood -- the vast flood of  
23          that size or -- that's the only time I've seen it in  
24          70 years.

25          Now, we are expecting, you know, by scientist and

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 the people that do the weather and stuff like that,  
2 that it may be another flood in the near future, but  
3 that's a gamble we take.

4 And I think the Creator -- the elders, we always  
5 pray to the Creator, we get our guidelines, and we get  
6 our directions in working with the Creator.

7 When we were there at the site, I wasn't  
8 satisfied. When we were there, we were following the  
9 instructors or facilitators for the field trip. We  
10 followed them, and this is where you go and this is  
11 where you -- you look at whatever this -- that would be  
12 destroyed once the dam is built. Those are things that  
13 they showed us around. They didn't give us that  
14 freedom of going wherever we wanted to look.

15 There are places there in that Springbank area,  
16 especially along the river, that certain kinds of herbs  
17 can grow there, and we find the -- those herbs are  
18 recognized by our elders and are used for medicine.

19 And the way I observed the area was that it wasn't  
20 sufficient enough to support this program.

21 Then they took us to a place where a monumental  
22 site that was -- we had nothing to do with that. And I  
23 don't know why, the provincial government, every time  
24 Stoney Nakoda people as a territory to -- to  
25 investigate or to look at, they all seem to be that

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1           this is Blackfoot territory.

2           I want to put that away. This is not Blackfoot  
3           territory. This is Stoney Nakoda territory. We've  
4           been in this area since time immemorial. We can go  
5           back 15,000 years and prove it, that we were here.

6           Back in 1956, '55s, there was an archeological  
7           test done at Deadman's Flat, just this side of Canmore.  
8           During that findings of the archeological thing, they  
9           found some arrowheads, they found some tomahawk heads,  
10          and there -- and those rocks only come from Wisconsin,  
11          Minnesota, South Dakota. See, our people were always  
12          up there. But the people, the Sioux Nation always  
13          shared whatever we need to trade to survive in those  
14          days. So -- so saying that, the Stoney Nakoda people  
15          had probably the biggest history in that area.

16          My grandfather, my great grandfather, in 1945,  
17          1947, '48s, they did some haying in there for a  
18          gentleman name Clem Gardner. My grandfather had a crew  
19          there, my dad and them worked for, hayed for  
20          Clem Gardner right along that Elbow River by the bridge  
21          there on Highway 22.

22          So I can name a few that always been in that area:  
23          The Stevens family; and the Ear (phonetic) family and  
24          the Bearspaw family. They were always in that area.  
25          And they did their hunting, trapping and fishing on

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1           that river.

2                     And it's nothing new to us. We could be still  
3 using it, but due to the fact that the land is occupied  
4 by public people, we are not allowed to go there unless  
5 we get a special permission to go there.

6                     There was one area in particular that, when we  
7 were -- when we were taking the -- they told us it was  
8 private land, the landowner didn't want us to go on  
9 that land, and that -- that land, to me, was the very  
10 heart of that dam, which the dam's going to go.

11                    And we need to further look at those things in our  
12 way, not directed by some educated guy that thinks he  
13 knows everything about the rocks and stones, and  
14 everything that goes on there. Archeological people.  
15 And just because they went to school and have studied  
16 the archeological ways of doing research, our people,  
17 our elders, know exactly what we're talking about. And  
18 we need to define more in that area.

19                    To me, right now, is, I think it's the provincial  
20 government is just pushing for time to get it through  
21 as fast as they can without -- without understanding  
22 the impact on that land that the dam's going to do.

23                    The animals that migrate back and forth, deer go  
24 back and forth through that area, moose comes through  
25 there, that area, and those -- those are things that we

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 need to discuss.

2 Even the little -- even the little animals that  
3 run around on the grass, sometimes we never seen them,  
4 but they're there. They're the -- they keep the  
5 earthly balance. They clean the earth. The little  
6 creatures that run around on the bottom of the grass,  
7 on the bottom of the river, or the bottom of the creek,  
8 and you go there, you see all these little insects in  
9 there, all kinds of -- they're the ones that keep the  
10 earth clean, and we have to respect that, and we have  
11 to honour that.

12 So, with that, I think, to me, we need to go  
13 further into that land area and find more, and even get  
14 permission to go on that private land, because that  
15 private land stands right in the heart of the dam, and  
16 we have to see it.

17 Otherwise, why are we having this conversation or  
18 this meeting? We are here to correct things. We are  
19 here hopefully to work together, to understand each  
20 other, where we're coming from.

21 And I'm very honoured to share some of my  
22 experience in that area, to be here with you, and  
23 hopefully in the near future, if I can still have the  
24 ability to help you guys out anywhere, I will -- I'm  
25 willing to go.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 I also sit on the Calgary elders Advisory Group  
2 and Education Board, Treaty 7, so that gives you a bit.

3 I would like to thank each and every one of you,  
4 and thank you, Mr. Chairman, for having the patience to  
5 listen to me. Thank you.

6 THE CHAIR: Our pleasure. Thank you very  
7 much, Elder Henry. Thank you.

8 A. MR. W. SNOW: (OTHER LANGUAGE SPOKEN). Thank  
9 you, Elder Henry.

10 And now, I'd like to have Elder John Snow, Jr.  
11 will be our next presenter. John is a landman and  
12 holds degrees, and maybe he can talk about some of his  
13 educational background. But John has been -- has done  
14 works with the -- with -- is a Wesley band member and  
15 has done works with Stoney tribunal administration over  
16 the years.

17 So John, take it away.

18 A. ELDER J. SNOW: Thank you, Chairman. Thank you to  
19 the Board.

20 As Bill said, most of the Snow family has  
21 graduated from Springbank high school. So we've gone  
22 to school with most of the pioneer and ranching  
23 families. We have a deep history into that area, as  
24 Elder Henry Holloway has shared with you.

25 Also I agree and support the testimony of



## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 Jackson Wesley, Henry Holloway, and the words spoken by  
2 the consultation manager, Bill Snow.

3 I have a master's degree in political science. I  
4 studied under Roger Gibbins, and my degree specializes  
5 in public policy, law, and administration.

6 I just wanted to share with you some remarks  
7 today. I also want to reiterate what Bill said. There  
8 are no artifacts protections for Stoney burial sites or  
9 artifacts. We have had to repatriate human remains  
10 that were Stoney origins, and we've had a hard time  
11 trying to rebury those remains.

12 There is no protection for Indigenous grave sites.  
13 There is no legislation to protect our Indigenous  
14 graves. And I think the response of some of the  
15 researchers has been discriminatory, it's been racist,  
16 and it's been false. And I hope that we can start a  
17 new road for reconciliation.

18 I thank the elder, Jackson Wesley, for the prayer.  
19 The prayer is what centres us and leads us through  
20 these very trying abuses that we live through.

21 I am John Snow, Jr., descendent of the Treaty 7  
22 signer, Chief Goodstoney. I am a member of the Stoney  
23 tribe. My Stoney names comes from the sacred  
24 mountains.

25 Our creation story begins with these sacred lands.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 We have many sacred sites, places of worship, areas of  
2 harvesting, reflection, meditation, and fasting sites.  
3 There is a way to understand one another if we show  
4 respect.

5 Our people have always known the Creator, and we  
6 are led by prayer, ceremony, and we are part of  
7 creation. We are part of many Treaties prior to the  
8 arrival of the settlers. We are now part of one  
9 another and the land. We are all part of relations to  
10 the land, plants, animals, waters, and the mountains.

11 We have many concerns with developments in the  
12 Elbow River area. We have many traditional and  
13 cultural areas we have not been consulted on, and we  
14 have not been in relationship with those who change and  
15 desecrate our ancestral lands.

16 Under Treaty 7, we have interests in all lands and  
17 developments.

18 The Stoney Aboriginal title case is being pursued  
19 in the courts of Alberta, British Columbia, and  
20 Saskatchewan.

21 We have wide and varied interests in all our  
22 ancestral lands. We have many prayer sites, burial  
23 sites, and harvesting sites that were taken away from  
24 us through prejudicial legislation over the past  
25 century.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1           We are pursuing our claims, and we seek to protect  
2 our interests on all traditional and cultural spaces  
3 and lands.

4           Through the *Indian Act* and other legislation, we  
5 were prohibited from many human rights in Canada,  
6 including worshipping on our sacred places.

7           For many of our people, we've been denied access  
8 to hunt, fish, gather, harvest in these and other  
9 traditional and cultural spaces for our Indigenous  
10 spiritual practices.

11           Few independent and environmental studies by our  
12 people have been completed for any developments on  
13 these lands and sacred areas. We have opposed other  
14 projects in the past, like the Bighorn dam. Many of  
15 our Treaty and land claim issues are still outstanding.

16           Our stewardship and relationship to these sacred  
17 lands has existed for centuries. Part of our history  
18 has been chronicled in my late father's book, "These  
19 Mountains Are Our Sacred Places." That should be a  
20 required reading for the Natural Resources Conservation  
21 Board.

22           Under discriminatory and prejudicial legislation,  
23 our people were forcibly removed from our own  
24 traditional and cultural places, prayer sites, and  
25 ceremonial areas.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1           There are differences in land tenure for  
2           Indigenous and western systems. One of these  
3           differences is regarding land ownership from the book  
4           "*These Mountains Are Our Sacred Places*" by the late  
5           Chief Dr. Reverend John Snow, my late father.

6           I quote from his book: (as read)

7           "This was something that was difficult,  
8           if not impossible, for Indians to  
9           understand because we had no concept of  
10          individual land ownership in the  
11          European sense. In those days, we did  
12          not own the land by receiving title or  
13          patent from a tribal authority. My  
14          people always believed that the land was  
15          created for its Indigenous inhabitants,  
16          animal, bird, and man. Our philosophy  
17          of life is to live in harmony with  
18          nature, and in accordance with the  
19          creation of the great spirit. Anyone  
20          wanting to live by those principles is  
21          more than welcome, and if he wants -- if  
22          he wants to, he may participate in our  
23          traditional ways, religion, and culture.  
24          He does not have to make a Treaty with  
25          us to do this. Certainly, only a greedy

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 person would make a Treaty with us and  
2 then break it to destroy our land and  
3 our way of life."

4 End of quote, page 33, Snow.

5 The Stoney Nakoda have names for the places that  
6 will be impacted by this dam. We have outstanding  
7 inherent rights that have yet to be dealt with properly  
8 by the Alberta Crown and the federal Crown. These  
9 inherent rights are protected by international Treaty,  
10 the Canadian constitution, and have been upheld by  
11 Canadian case law.

12 Consultation must be inclusive to the Indigenous  
13 First Nations who have historical connections to areas  
14 targeted for development.

15 The Indigenous First Nation interests are being  
16 harmed without proper or adequate consultation. The  
17 harm contravenes the Treaty, the Truth and  
18 Reconciliation Commission, and the report on the United  
19 Nations Declaration on the rights of Indigenous people.

20 The Crown in right of Canada states that harms will  
21 be mitigated or compensated because there is an onus on  
22 the Crown to act honourably and to have no sharp  
23 dealings with the rights holders in a traditional or  
24 area with outstanding claims. This respect and approach  
25 were not upheld by the initial workers, spoke without

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 honour, without knowledge, and without understanding to  
2 our knowledge keepers, our elders, and the outstanding  
3 legal claims made by the Stoney people in this area.

4 As part of the Crown to whom we have signed Treaty,  
5 Alberta has an obligation to uphold the honour of the  
6 Crown in this area of our Treaty 7.

7 It is 2021. We will not allow racist or  
8 discriminatory actions to go unchallenged. There are  
9 tribunals, such as the Human Rights Tribunal, that may  
10 need to be involved if Alberta cannot civilly deal with  
11 Indigenous people who hold claims in this area.

12 We are acting in good faith by appearing at this  
13 hearing, but we are also educated and have knowledge  
14 that is outstanding with our claims and inherent rights,  
15 and those must be advanced so that our future  
16 Stoney Nakoda will keep their ancestral inherent rights  
17 and historic ties to this land.

18 I myself experienced the flooding of Stoney graves  
19 at the Bighorn dam in 1968 and 1969.

20 The dam is located near Kootenay Plains by the  
21 Saskatchewan crossing where our dead are buried and now  
22 under water.

23 I know we were not allowed to move our Stoney  
24 graves at that site, and the graves were flooded. I  
25 also remember triggers of this trauma with the

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 discussion of the Springbank dam. I quote from my  
2 father's book, 52 years ago this month, the  
3 Stoney Nakoda experienced that the building of the  
4 Bighorn dam. The following is an excerpt of the book,  
5 "*These Mountains Are Sacred Places*" by Chief John Snow.

6 I quote: (as read)

7 "I went to the Bighorn Kootenay Plains  
8 area to look over the situation for  
9 myself. What I saw was unbelievable.  
10 Land that was -- that had belonged to  
11 the Stonies, land that the Stoney  
12 Indians still claimed, was being  
13 bulldozed without consideration or  
14 consultation with my people. As a  
15 consequence of what I saw, I held a  
16 meeting with Wesley band members living  
17 in the area. As a result of this  
18 meeting, the tribal council took a  
19 position of unanimous opposition to the  
20 construction of the Bighorn Dam unless  
21 and until the Stoney's claims in area  
22 were settled. Snow page 176."

23 To bring this opposition to the government's attention,  
24 I addressed the following letter to Premier Strom:

25 (as read)

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 "Dear Premier Strom: On behalf of the  
2 Stoney Indian council at Morley, I am  
3 writing to you concerning the Bighorn  
4 dam project. It has been thought up,  
5 planned, and is now actually being built  
6 without any time consulting the Indian  
7 people on the Bighorn Indian reserve.  
8 It appears the government has once again  
9 ignored the Indian people on this very  
10 important matter that directly affects  
11 their way of life. The people of  
12 Bighorn reserve are part of the Wesley  
13 band of Stoney Indians at Morley.  
14 Stoney band council at Morley is very  
15 concerned about what is happening, and  
16 we are requesting that you and the  
17 cabinet members concerned with the  
18 project meet with our band  
19 representatives to discuss the various  
20 problems that have arisen and will  
21 continue to rise. The Indian graves  
22 have already been destroyed by  
23 bulldozers clearing the land. All  
24 clearing must be stopped immediately so  
25 that these graves can be relocated



## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 before the markings are destroyed and  
2 the locations lost forever. Many of  
3 these graves cannot be located with the  
4 snow covering the markers. There is an  
5 urgency due to the problems that are  
6 being even now created. Therefore, we  
7 request a meeting by the end of  
8 March 1969. We do not want to talk to  
9 representatives who do not have  
10 authority to make decisions. We have  
11 talked with one of your representatives  
12 in our council meeting on March 11th,  
13 and all he could tell us was that he had  
14 no authority and would have to talk to  
15 other people about this.  
16 We want to talk to our elected  
17 legislatures who are responsible for  
18 making policy. We'd prefer if you would  
19 come to Morley to discuss these  
20 problems, but we recognize you are very  
21 busy, and we would be willing to send a  
22 delegation to meet you in your office.  
23 We are opposed to the construction of  
24 the dam because of the problems it will  
25 create. Some of the problems are as

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 follows: Enumerated Number 1, Indian  
2 graves; Number 2, Indian homes to be  
3 flooded; Number 3, Indian land to be  
4 flooded; Number 4, hunting area;  
5 Number 5; grazing land for horses;  
6 Number 6, traplines; Number 7, Sundance  
7 and recreation area; Number 8,  
8 historical and cultural significance to  
9 the Indian people of the flooded area;  
10 Number 9, disruption of Indian way of  
11 life through development of area;  
12 Number 10, fear of living below the dam.  
13 Please arrange this meeting at once.  
14 Let us know when you will meet with us.  
15 Your help and cooperation in this  
16 important matter will be greatly  
17 appreciated. Thank you kindly, Chief  
18 John Snow, Chief of the Wesley band."

19 Captured on his book, page 177, 178.

20 Dad further writes: (as read)  
21 "Unfortunately for my people, the  
22 legislators turned a deaf ear. The dam  
23 was built, and much of the Stoney's  
24 traditional hunting grounds, land to  
25 witch we believe we had a valid claim

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 under Treaty 7, now lies under 27 miles  
2 long of artificial lake. The  
3 destruction of the land was a terrible  
4 thing to watch. Haze filled the air as  
5 growing things were burned off to clear  
6 the ground, homes were swept aside by  
7 heavy machinery, graves turned over or  
8 swallowed up by the new lake. The  
9 tribal council did manage to get some  
10 graves moved to a new site. Only two  
11 cabins were rescued. They were moved  
12 and reconstructed on the Bighorn  
13 reserve. Even far-reaching its results  
14 -- even more far-reaching in its results  
15 was the almost complete disappearance of  
16 game from the area. The people living  
17 on the Kootenay Plains have always been  
18 among the most independent of the  
19 Stonies. The legacy of Peter Wesley's  
20 long rocky trail still lives, but with  
21 hunting destroyed and little employment  
22 for skill -- unskilled labour in the  
23 area, 95 percent of the Bighorn  
24 residents live on welfare today. The  
25 physical damage and psychological damage

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1           that the building of the Bighorn dam  
2           caused my people can never be  
3           calculated."

4           End of quote.

5           I know some traditional areas, and have hunted with  
6           my father and other elders in the Springbank area. This  
7           is a Stoney traditional trail, as described in the  
8           report, Chiniki place names. These areas are based on  
9           the old Stoney buffalo trails.

10          I myself have represented Stoney trappers with  
11          traplines in the area.

12          I would also point out that there is a trail named  
13          after my late grandfather Chief Tom Snow.

14          Tom Snow Trail extends through our traditional and  
15          ancestral lands.

16          We have been part of this land since time  
17          immemorial, and we believe the Stoney people must be  
18          part of any development in the area.

19          The Springbank dam development should have  
20          completed traditional, social, cultural assessments, and  
21          traditional studies of the Bow Valley respecting Stoney  
22          sacred places, artifacts, burial sites, prayer sites,  
23          and harvesting sites.

24          Studies should be led by Stoney people, and the  
25          information for cultural and traditional teachings must

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 be protected by intellectual property agreements.

2 There are many sites that have been desecrated. We  
3 have many other sites that we will not share unless  
4 there are protective agreements.

5 We have a different experience on our ancestral  
6 lands being removed from these Indigenous spaces and put  
7 on reserve. We have a knowledge of the land that has  
8 not been respected. There is a need to respect the  
9 people and the land. We believe that the past has not  
10 been one of respect, and we need to begin our  
11 relationships by reconciling past abuses. Much more  
12 work can be done on reconciliation with Indigenous  
13 people.

14 All developers should be required to have proper  
15 historical, traditional, and cultural awareness training  
16 sessions.

17 All studies of environmental assessment must have  
18 our historical, cultural, and traditional knowledge  
19 assessments for a full understanding of our sacred  
20 lands.

21 The Stonies have won many awards -- the latest is  
22 the grizzly study -- and have noted the importance of  
23 telling our story and sharing of knowledge from our wise  
24 and sage elders.

25 We have participated in studies and need to be

## STONEY NAKODA NATIONS TOPIC #2 PANEL

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1           respected for our knowledge of the land and our  
2           continuing rights to sacred places, burial sites,  
3           harvesting sites, ancestral lands and prayer sites.

4           We feel there is a long road for reconciliation  
5           that needs to begin today.

6           Thank you, Mr. Chairman.

7       THE CHAIR:                   Thank you, Elder John Snow. Thank  
8       you.

9       A.   MR. W. SNOW:           (OTHER LANGUAGE SPOKEN.)

10           Now, our next speaker -- our next speaker name is  
11           Larry Daniels, Jr. Larry Daniels is a member of the  
12           consultation team, and he -- he is based out of the  
13           Stoney community and Eden Valley, and is a Bearspaw  
14           band member.

15           Larry was able to take part in the fieldwork that  
16           happened back in 2016, and will relay some of his  
17           experiences during that time and about the project.

18           (OTHER LANGUAGE SPOKEN), Larry.

19       A.   MR. DANIELS:           Thank you. Good morning. (OTHER  
20       LANGUAGE SPOKEN).

21           My name is Larry Daniels, Jr. I'm from  
22           Eden Valley, and I'm a member of the Bearspaw First  
23           Nations of the Stoney Nakoda Nation out of Eden Valley  
24           and member of the consultation team.

25           Today, I will be speaking about the traditional

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 stories of the Stoney people that concern project area  
2 of the SR1 Springbank dam project. I will be also be  
3 speaking about the fieldwork that the Stoney Nakoda  
4 consultation team had conducted while doing fieldwork  
5 for the Springbank SR1 project in 2016.

6 To my knowledge, there is no knowledge or an  
7 agreement in place to protect Stoney cultural  
8 information about the sites in the project area, SR1  
9 Springbank project.

10 I'm about to talk about some traditional stories  
11 of the project area. Some of these stories are  
12 captured in the book, "The Stonies of Alberta" by  
13 Sebastian Chumak.

14 These traditional stories are a teaching tool that  
15 we use to pass down our culture to the younger  
16 generation. The stories are lessons and knowledge of  
17 places, people, landscapes and wildlife. These stories  
18 are still told in our communities, and these places are  
19 still remembered by the Stoney Nakoda people.

20 And I'm going to tell a little bit of story about  
21 one. They call it (OTHER LANGUAGE SPOKEN).

22 My first language is Stoney, so kind of bear with  
23 me. I kind of stutter a lot. So I'm just going to  
24 tell the story the way I was told, and -- and the  
25 story, I guess, it always starts "Long ago."

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1           It was in the sweetgrass moon. The Stonies are  
2 moving to a buffalo camp near the Springbank creek.  
3 The people feel the best with song. To Her Braids  
4 (phonetic), a young wife has left behind a favourite  
5 bone scraper at the old camp. She turns her horse  
6 around.

7           An enemy raiding party of "Big Bellies" comes upon  
8 the lone woman's trail. They followed her tracks, then  
9 began to circle.

10          Soon the Big Belly scouts see a women riding  
11 towards them. The Big Bellies quickly conceal  
12 themselves in the tall Sagebrush flats alongside her  
13 trail.

14          As the Stoney woman draws close, the Big Bellies  
15 encircle her. Her horse rears and throws her. "Have  
16 no fear," says White Claw, the son of the Big Belly  
17 chief. "You shall live. I take you for my wife."  
18 They ride off with her.

19          Meanwhile, Prairie Man, husband of To Her Braids  
20 is looking for his wife. The people tell him that she  
21 has gone back to the old camp for something. Prairie  
22 Man mounts up and rides back to the old camp. He  
23 follows her trail, but he can find no trace of her.

24          He follows the trail for three days. As the third  
25 night, he sends -- he sees the fires from a big camp



## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1 far into the darkness. He ties up his horse and makes  
2 his way in on foot. Keeping low, he approaches the  
3 enemy camp along the creek. He sings and calls down  
4 the prong horn spirit to strengthen his blood.

5 With first light, he hides in the shrubs along the  
6 rocky creek. When the sun opens his eyes on the fourth  
7 day, Prairie Man sees a woman coming down for water.  
8 She is brightly dressed and singing to herself. It is  
9 To Her Braids, and she looks happy.

10 Prairie Man, he looks to her and whispers, "My  
11 wife, how can we escape from here?" To Her Braids  
12 hesitates, then speaks. "Let me return with the water,  
13 my husband. I will come when the camp is asleep. Stay  
14 here."

15 To Her Braids returned to White Claw's lots. She  
16 tells her Big Belly husband about Prairie Man. The Big  
17 Bellies storm the creek and capture the Stoney. They  
18 club him and drag him to the camp. Then he is laid out  
19 on the ground and stretched with the rawhide thongs to  
20 stakes. They pour hot ambers from the fires down his  
21 throat and leave him to die in the burning sun.

22 When the star close their dance, the Big Belly  
23 camp is broken. As the people ride out, an old Big  
24 Belly woman, drumming all night, watches the Stoney  
25 die.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Louden

1           Just as her people ride over the ridge, she  
2 returns to the Stoney and cuts the killing rawhide  
3 chain: "My son, the scars in your throat are many, and  
4 deep. It is better you live."

5           She leaves her sharp knife beside him and scurries  
6 off. Prairie Man raises his head: "Grandmother, you  
7 have put new grass between my spirit and death. From  
8 this day, always raise your lodge a little north from  
9 the main camp. We shall meet again in war, but people  
10 will not sleep. You shall not die when I return."

11           As the summer moon fade, the Stonies led by the  
12 one with scars in his throat prepared to attack the  
13 Big Belly encampment. Prairie Man warns his warriors  
14 not to kill anyone in the north lodge, for he has --  
15 but the main camp, we shall destroy.

16           The Stonies attack. The Big Bellies are taken by  
17 surprise. When the dust clears, White Claw's scalp is  
18 in Stonies' hands. Many scalps hang from Stoney men.  
19 The one with scars in his throat asked his own people  
20 if To Her Braids shall live or die. "Death by fire,"  
21 the people shouted.

22           A great fire is preparing for To Her Braids, and  
23 this -- and in the end, she was tossed into the fire.

24           And the fieldwork that we conducted, there were  
25 many issues that came up during the course of the

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Examined by Ms. Loudon

1 fieldwork.

2 The fieldwork was not conducted in a way that we  
3 have normally conducted fieldwork for other -- other  
4 projects. The government representatives were  
5 disrespectful to the Stoney elders and the consultation  
6 officers. There was a feeling that this work needed to  
7 be done quickly.

8 It was apparent that the government personnel  
9 conducting the fieldwork with the Stoney people were  
10 informed about the Stoney language or culture.

11 The government representative who attended the  
12 fieldwork were eager to understand our place names, or  
13 understand [verbatim] of these areas during the course  
14 of the fieldwork. This made our group uncomfortable.

15 I understand that other First Nations travelled to  
16 the sites in the project area.

17 Alberta Transportation directed the fieldwork in  
18 each of the sites. The group was made to travel  
19 together, so one person could not visit an area  
20 individually. This is not how Stoney Nakoda Nation  
21 does fieldwork. Excuse me.

22 We were not able to confirm a possible grave  
23 site -- new site -- I guess site Q from the Stoney  
24 cultural assessment report. We're pretty sure there  
25 was a couple of grave sites there. But like we said,

## STONEY NAKODA NATIONS TOPIC #2 PANEL

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1 we were rushed and couldn't do a proper sweep of the  
2 area.

3 The Stoney consultation field workers were not  
4 able to travel to the sites outside of the project  
5 area. The area that the Stoney consultation group was  
6 taken to outside of the project area was the Our Lady  
7 of Peace site. We were not told, we did not request to  
8 go to the site, and we were not interested in seeing  
9 this site, but Alberta Transportation took us to this  
10 site, and until this day, I have no idea why they take  
11 us there.

12 I think the -- my feeling was they kind of  
13 insulted us, in a way, and some of the elders were  
14 really uncomfortable with it.

15 Excuse me, I've got something in my throat here.

16 But, yeah, thank you for listening to me. Thank  
17 you, Chairman and Panel. Thank you.

18 A. MR. W. SNOW: (OTHER LANGUAGE SPOKEN)

19 THE CHAIR: Thank you, Mr. Daniels.

20 A. MR. W. SNOW: (OTHER LANGUAGE SPOKEN).

21 Thank you, Larry.

22 Our next speaker is going to be Chris --  
23 Chris Goodstoney. Chris is a -- also a member of the  
24 Stoney consultation team, and I believe Chris will be  
25 speaking about -- Chris was also on the fieldwork team

## STONEY NAKODA NATIONS TOPIC #2 PANEL

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1           during this project back in 2016, and I believe Chris  
2           will be speaking to -- speaking about his experiences  
3           during that time, during the fieldwork and -- and some  
4           of his thoughts.

5           Chris, are you there?

6       A.   MR. GOODSTONEY:        Sure. Can you hear me?

7       A.   MR. W. SNOW:            Yeah, we can hear you. Maybe if  
8           you can turn up your volume a little bit.

9       THE CHAIR:                    Yes, it's very difficult to hear  
10           still.

11      A.   MR. GOODSTONEY:        What about now?

12      THE CHAIR:                    It's pretty quiet. The court  
13           reporter is shaking her head that she will not be able  
14           to get it. Could be a Zoom setting.

15      A.   MR. GOODSTONEY:        And now?

16      THE CHAIR:                    It's better. Did you elevate  
17           your --

18      A.   MR. GOODSTONEY:        Yes. I'll just hold up my mic  
19           here.

20      THE CHAIR:                    Okay, thank you. Sort of awkward,  
21           but we appreciate it. We'd like to get on the  
22           transcript what you're saying. So, thank you.

23      A.   MR. W. SNOW:            Okay, Chris, go ahead.

24      A.   MR. GOODSTONEY:        Okay. So I'll start by giving a  
25           statement, and then I would advise, Mr. Chair, that I

## STONEY NAKODA NATIONS TOPIC #2 PANEL

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1 will be referring to the Alberta Transportation as "AT"  
2 most of the time in my statement.

3 THE CHAIR: Sorry, I have to interrupt. The  
4 court reporter is -- she's -- Ms. DiPaolo is shaking  
5 her head that she's not going to be able to transcribe.

6 You're on Zoom, right?

7 A. MR. GOODSTONEY: Yes, I am.

8 THE COURT: Ah, there we go. There we go.

9 A. MR. GOODSTONEY: All right. We'll -- I will throw  
10 this away, then.

11 THE CHAIR: Okay, perfect. Can you hear us?

12 A. MR. GOODSTONEY: Yes. Yes, sir.

13 THE CHAIR: Thank you.

14 A. MR. GOODSTONEY: Okay. We'll start.

15 Thank you. (OTHER LANGUAGE SPOKEN), Mr. Chair,  
16 and Board members.

17 (OTHER LANGUAGE SPOKEN) My name is  
18 Chris Goodstoney, Wesley Consultation Officer, with the  
19 Stoney consultation and member of the Stoney Nakoda  
20 First Nation and descendant of Chief Goodstoney,  
21 signatory of Treaty 7.

22 I was born and raised in (OTHER LANGUAGE SPOKEN)  
23 Morley, Alberta, here in the traditional ancestral  
24 territories of Stoney Nakoda First Nation.

25 Since time immemorial, our great nation have lived

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1 and thrived on these lands. Our people relied heavily  
2 on the plants, animals, water, and landscapes to move  
3 as we always did for thousands of years.

4 Even as our buffalo were nearly exterminated, our  
5 people never faced hardship because we knew what our  
6 territory provided.

7 Evidence of our history in the Bow Valley is  
8 prevalent and very important to our elders.

9 Every tribe in the Nakoda Nation from  
10 Lake Minnewanka to Lake Manitoba believe the key to our  
11 cultural survival is to utilize the land as a backbone  
12 to teaching our youth our traditions. This is still  
13 practiced to this day. However, in recent times, our  
14 history and our heritage and our lands has not been  
15 given the proper acknowledgement and respect it  
16 deserves.

17 I'm here today to share with you some of the  
18 details pertaining to our cultural assessment that  
19 myself, elders, and my colleagues conducted back in  
20 2016 within the Springbank SR1 project area north of  
21 the Elbow River.

22 During the assessment, we identified numerous  
23 points of interest that we recognize as Nakoda origin.  
24 These included sites such as homestead sites,  
25 harvesting sites, ceremonial sites, hunting sites.

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1 Many more features could have been identified if we had  
2 been given the opportunity to independently explore the  
3 landscape during the spring or summer months and  
4 conduct the site visit following our standard process.  
5 However, the site visits were not conducted in the way  
6 we normally conduct fieldwork.

7 Not only was the process and schedule dictated by  
8 the proponent, our elders were constantly observed,  
9 closely followed, and questioned by the proponent which  
10 created an atmosphere where they were unable to share  
11 their knowledge and conduct the site visit in  
12 confidence.

13 Further, the weather was not ideal for the most  
14 part and quite cold, which was hard on our elders, and  
15 we felt that we were led or directed along routes that  
16 were predetermined by AT. This goes against how  
17 Stoney Nakoda conducts site visits.

18 In addition to not being given sufficient to time  
19 conduct our assessment, the routes we were directed to  
20 walk were predetermined by AT. In some cases, we were  
21 led to an area that the proponent representative deemed  
22 points of interest.

23 You must understand that this situation was  
24 unusual. We had never experienced or accepted a  
25 non-First Nations' determination of what is and what is



## STONEY NAKODA NATIONS TOPIC #2 PANEL

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1 not of historical importance. Our stewardship and  
2 relationship to this land goes back for thousands of  
3 years, and we are familiar with the ecosystems,  
4 habitats, landscapes. We are well aware of what is  
5 important.

6 Because we were guided to predetermined locations  
7 on predetermined schedule, we feel the site visits were  
8 biased to meet Alberta Transportation's objectives.

9 During the site visit, we experienced many  
10 difficulties in conducting our assessment to the full  
11 extent. For example, on numerous occasions, our elders  
12 expressed the need to assess areas adjacent to the  
13 project boundaries, particularly on the northwest end  
14 of the project boundary.

15 The elders understood and explained to AT  
16 representatives that the project of this size impacts  
17 are inevitable, but they also explained that unforeseen  
18 impacts will take place considering the fact that, for  
19 this project, the impacts have been -- the impacts have  
20 been determined so far are theoretical.

21 The elders expressed concern the impacts within  
22 the project module affect the areas immediately  
23 adjacent to the project area; therefore, those impacts  
24 should be taken into account. In other words, our  
25 elders described the need not only to look within the

## STONEY NAKODA NATIONS TOPIC #2 PANEL

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1 project area but to consider certain locations just  
2 outside of the boundary.

3 I would like to advise the Board that this method  
4 of assessment by Stoney Nakoda is not uncommon. When  
5 we conduct cultural assessments, we take into  
6 consideration all aspects of land impacts, as well as  
7 potential infringement Section 35 rights. However,  
8 during the SR1 fieldwork, we were advised by AT  
9 representatives that there will be no impacts on the  
10 adjacent areas, that there is no need to go beyond the  
11 project boundary.

12 It was clear to our team that, in the interest of  
13 time, schedule, and convenience, our requests were  
14 denied and we were unable to assess those areas of  
15 interest.

16 I would like to address the issue of  
17 confidentiality.

18 During the site visits, I understood that there  
19 was no agreement with AT for SNN -- for Stoney Nakoda  
20 to disclose or share cultural knowledge or to share  
21 information on cultural features identified within the  
22 project area.

23 During the site visits, the elders, including  
24 myself and my colleague Larry Daniels, Jr. felt the AT  
25 representatives interfered with our cultural assessment

## STONEY NAKODA NATIONS TOPIC #2 PANEL

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1 and would sometimes interrupt our elders' conversations  
2 by questioning them and by not giving them privacy to  
3 conduct their work.

4 I don't know if this was a deliberate action or if  
5 he was just oblivious to the elders' frustrations;  
6 however, in our experience, conducting many assessments  
7 over the years, while having a proponent representative  
8 question or express interest in our work, is not  
9 uncommon.

10 Sharing intellectual property is not part of our  
11 assessment process.

12 Stoney Nakoda knows how to conduct our cultural  
13 assessments. In absence of a confidentiality  
14 agreement, we expect proponents and their  
15 representatives to respect our procedure and privacy.  
16 With the Springbank assessment, that was not the case.

17 As our elders grew frustrated from the lack of  
18 control over the assessment process, the lack of  
19 privacy, and the lack of land access, the AT  
20 representative coordinated an unwelcome side trip and  
21 brought our team to the Our Lady of Peace monument  
22 located on the west side of the project area outside of  
23 the project boundary.

24 The writing on the plaque, we felt, had false and  
25 misleading information, as is the case with many of our

## STONEY NAKODA NATIONS TOPIC #2 PANEL

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1 archeological sites in our territory. Nevertheless, AT  
2 representatives wanted our group to see this monument.  
3 This unplanned stop was viewed by our elders as an act  
4 of disrespect by the Alberta Transportation  
5 representatives, especially considering the fact that  
6 our requests to explore areas immediately adjacent to  
7 the northwest boundary were denied.

8 Our team did not appreciate the Alberta  
9 Transportation representative's biased attitude, which  
10 our team viewed as a lack of respect for not only our  
11 heritage on this land, but for our elders as well.  
12 Therefore, due to all the factors I have noted, our  
13 elders finally lost interest in participating in  
14 completing the fieldwork. In fact, one of our elders  
15 openly expressed his displeasure in the Alberta  
16 Transportation representative, which is something that  
17 I have never witnessed in all the site visits I have  
18 conducted. However, with some conferring and  
19 mitigating on my part, I convinced our elders to  
20 continue to participate in the fieldwork.

21 In summary. Our team believed the fieldwork  
22 remains incomplete and note the following: The  
23 behaviour of the Alberta Transportation representative  
24 was unacceptable, and the work conducted was considered  
25 not meaningful.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

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1           2. The assessment was biased by interference by  
2 Alberta Transportation.

3           Stoney Nakoda requested additional days in the  
4 following spring and summer months to fully complete  
5 our assessment with an unbiased Alberta Transportation  
6 representative, of course.

7           4. We encountered a variety of sacred sites and  
8 identified a number of artifacts, that the elders  
9 recognized the pipe ceremony is warranted and requested  
10 ceremonies be conducted. To this date, the  
11 recommendations have yet to be addressed. Therefore,  
12 Stoney Nakoda First Nation, particularly the Wesley  
13 First Nation, does not support the Springbank dam  
14 project.

15           Thank you, Mr. Chair and Board members, for  
16 allowing me to give my statement, and I hope you and  
17 all your family stay safe. (OTHER LANGUAGE SPOKEN)

18 THE CHAIR:                   Thank you, Mr. Goodstoney, and I  
19 appreciate you taking the time. Thank you.

20 A. MR. W. SNOW:           (OTHER LANGUAGE SPOKEN) Thank  
21 you, Chris.

22           Sara, I'm not sure if we -- do we move into the  
23 next presentation by Megan at this point?

24 Q. MS. LOUDEN:           I think -- Mr. Chair,  
25 Ms. Megan Berry will be the last witness to give her

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1 statement, and then the panel will be available for  
2 cross.

3 So I wonder if we can allow Ms. Berry to give her  
4 statement, and then perhaps a break?

5 THE CHAIR: That would be great. Sure.

6 Q. MS. LOUDEN: Sure.

7 So, yes, Bill and Megan, now is the time you can  
8 present your statement.

9 A. MS. BERRY: Thank you, Sara.

10 Mr. Chair, members of the Board, as I stated  
11 earlier, I am Meg Berry, and I am privileged to be here  
12 today to speak on behalf of the Stoney Nakoda Nations  
13 regarding the significance assessment and the  
14 mitigation requirements laid out in the 2018 EIS for  
15 historic resources that will be impacted by the  
16 project.

17 This morning, we have heard from the Stoney Nakoda  
18 elders and knowledge holders, as well as members of  
19 their consultation team, about the significance of the  
20 proposed project area to the Stoney Nakoda people.

21 This has included oral histories, place names, and  
22 traditional use site areas that are located within the  
23 project area or surrounding it including: Buffalo  
24 hunting camps located along the Springbank stream; the  
25 use of the Elbow River for fishing, hunting and

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1 habitation; and trails and travel corridors that  
2 transect the project area.

3 While some of these oral histories might seem  
4 intangible to many people, tangible archeological  
5 evidence from this region can be interpreted to support  
6 many of these narratives and can provide physical  
7 evidence.

8 Archeology is the study of the human past through  
9 material remains. It is important, as an understanding  
10 of our past, and the study of cultural and natural  
11 heritage, provides people with a deep connection to  
12 place, it provides identity, and it embodies the  
13 continuity of human spirit and story, and allows for  
14 us, with this understanding of our past, to help  
15 identify how we want to make our way forward.

16 It has been shown that engagement within heritage  
17 and archeology increases health and well-being within  
18 communities, while the unlawful destruction of cultural  
19 heritage is viewed as a crime against humanity in the  
20 international courts.

21 Currently, our understanding of the past within  
22 Alberta extends over 13,000 years before present. The  
23 project area that we are speaking to today, SR1, is  
24 within an environmental transition zone in the  
25 Bow Valley drainage. The Bow Valley contains several

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1 of Alberta's old or deep-time archeological signatures.  
2 Sites surrounding the proposed project area have been  
3 dated to over 10,000 years.

4 This includes the Vermilion Lake site and  
5 Minnewanka Lake site located west of Banff; to the  
6 southeast of the site area is the Sibbald Creek site;  
7 and to the east near Calgary are sites with the  
8 thrilling names of "EGPN 414," 413, and 480, and  
9 these -- and there are many more in this landscape.

10 But what I find is so interesting about these  
11 sites, and others within this area, is that they show  
12 evidence indicating that people continuously use and  
13 return to these lake locations for more than  
14 10,000 years, showing evidence of occupation that  
15 generally extends from the pre-contact period, pardon  
16 me, through the contact period or the historic period.

17 So the reason for this rich and continuous  
18 deep-time archeological signature is due to multiple  
19 factors: The Bow Valley is a natural corridor that  
20 extends from the prairies through the front ranges of  
21 the Rocky Mountains and into the interior plateau.

22 A diary entry from 1863 by John Palliser, an early  
23 British Explorer in the area, speaks to the use of this  
24 landscape as a travel corridor, and he notes, and I  
25 quote: (as read)



## STONEY NAKODA NATIONS TOPIC #2 PANEL

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1            "A few miles brought us to the Stoney  
2            Indian camp, which is situated in one of  
3            the prettiest spots I have seen in this  
4            country, at the mouth of the Highwood  
5            River."

6            They had been travelling south along the base of the  
7            mountains to meet the Kootenays when they crossed into  
8            the plains.

9            The Highwood River is located to the south of the  
10           project area. Environmentally and climatically, this  
11           area has functioned as an ecological hotspot of resource  
12           biodiversity and abundance for millennia, providing  
13           First Nations people with ample water, food, habitation,  
14           ceremonial and sacred areas.

15           The project area itself is rich in resources,  
16           hosting a wide array of culturally significant and  
17           keystone animal and plant habitats and is near to many  
18           significant drainages and important waterways such as  
19           the Elbow River. The topographic relief of this area  
20           provides protect from climatic elements and changes that  
21           we all know are associated with Alberta weather.

22           The landscape within and surrounding the project  
23           area is evidently layered in heritage. It is rich in  
24           pre-contact archeological site areas including:  
25           Campsites, bison kill sites, stone features, artifact

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1 scatters, and isolated artifacts, amongst others.

2 They are generally found clustered along drainages  
3 and within areas that have not been impacted by ground  
4 disturbance associated with farming activities. They  
5 can be found on the surface or they can be found deeply  
6 buried and stratified.

7 For example, deep testing conducted under other  
8 archeological permits, including Permit Numbers 02-069  
9 and 03-271, near to the project area, revealed  
10 archeological sites at depths between 75 to  
11 110 centimetres below surface, showing that this  
12 landscape has the potential to contain deeply buried,  
13 pre-contact archeological site areas, as well as  
14 surficial archeological sites.

15 In addition to the pre-contact archeological sites  
16 within and surrounding the project area, historic sites  
17 such as homesteads, farms, missions, and dairies have  
18 also been reported and are commonly found within the  
19 landscape. This is due to the relationship of this  
20 place with early ranching, trading, and mission  
21 activities, and this relationship extends over  
22 150 years.

23 Significant historic sites within the landscape  
24 include the Our Lady of Peace Mission, which we've heard  
25 about this morning, which is located 100 metres outside

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1 of the proposed project area. The mission was  
2 established in 1872 and was the first permanent Catholic  
3 mission in Alberta.

4 Subsequently, a trading post was established near  
5 to the mission by Sam Livingston, and following that was  
6 the establishment of ranching and farming homesteads,  
7 which are the seeds that have developed Alberta into a  
8 vibrant ranching and farming province that we know  
9 today.

10 One thing that is incredibly significant, and that  
11 this landscape also speaks to, is the period directly  
12 before and after the signing of the Treaties, a  
13 transitional period with First Nations communities and  
14 Euro-Canadians were interacting and coexisting for the  
15 first time, managing and mitigating this incredibly  
16 different and difficult time period with their own  
17 strategies and needs.

18 This period is not well understood and is  
19 unrepresented in the archeological literature. There  
20 are stories of the Stoney Nakoda camping along the  
21 Elbow River during this time period and interacting with  
22 ranchers and other landowners in this area that have not  
23 been told or investigated fully. These narratives speak  
24 to our collective heritage of contact and can help  
25 better illuminate this time period.

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1           So from this overview and from the information  
2 shared by the Stoney Nakoda elders and knowledge holders  
3 and texts, you can see that the landscape is a complex,  
4 a cultural heritage that is interconnected and woven  
5 together through time and space.

6           As such, an assessment of impacts to heritage  
7 resources or historic resources within the proposed  
8 project area needs to take into account many factors  
9 that we believe were not completed at the time of the  
10 writing of the 2018 EIS.

11           A Historic Resource Impact Assessment, or HRIA, was  
12 undertaken by the proponent in 2016 and was thorough for  
13 the lands it possessed, but it is noted within the final  
14 report that it was not completed.

15           At the time of the completion of the EIS in 2018,  
16 an HRIA was still required to be undertaken for deep  
17 testing in six sections of land, and as I noted  
18 previously, this landscape has the potential to contain  
19 deeply buried sites. There were also four gap areas  
20 where the PDA was revised to include landscapes  
21 containing archeological potential that required an HRIA  
22 assessment. Archeological surface and subsurface  
23 testing were still required in areas where land access  
24 was not granted by landowners at the time of the initial  
25 HRIA.

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1           And, additionally, Alberta Culture, now Alberta  
2           Culture, Multiculturalism, and the Status of Women, or  
3           ACMSW, had yet to issue their requirements for the  
4           proposed project to proceed under the *Historic Resource*  
5           *Act*, which could require excavation of reported  
6           archeological site areas within the project footprint  
7           for avoidance.

8           Consultation when the EIS was written was also not  
9           undertaken on archeological site areas found within the  
10          project area, and the Stoney Nakoda had yet to be  
11          informed by Alberta Transportation on the findings of  
12          the HRIA, or the requirements issued by ACMSW, for  
13          mitigation or avoidance of reported archeological sites  
14          under the Act, something that was requested by the  
15          Stoney Nakoda during consultation on the proposed  
16          project.

17          As I noted earlier, within this landscape, there  
18          are Stoney Nakoda traditional use site areas, as well as  
19          the aforementioned archeological site areas. Both are  
20          culturally significant and important to the  
21          Stoney Nakoda Nations and, as such, both areas need to  
22          be assessed by the Stoney Nakoda prior to the -- prior  
23          to the development of this project.

24          This would have allowed for the proponent to  
25          holistically reflect the significance of the historic

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1 resources within the project area in the EIS in 2018 and  
2 develop a mitigation plan that is inclusive of  
3 Stoney Nakoda's informed views on the subject.

4 While Alberta Transportation has consistently noted  
5 that they have provided Stoney Nakoda with the  
6 opportunities for TU site visits, it does not appear  
7 that there has been an offer for Alberta Transportation  
8 to disseminate the findings of the HRIA or discuss the  
9 requirements for the proposed project issued by ACMSW  
10 under the Act under 2020 -- pardon me -- until July of  
11 2020 in the middle of a pandemic.

12 For the Stoney Nakoda to properly complete an  
13 informed assessment to identify all cultural values  
14 within the proposed project area, archeological sites  
15 also need to be assessed. For this to happen, the  
16 Stoney Nakoda need to be appropriately informed of what  
17 is there and how it will be impacted by the proposed  
18 project. This has yet to happen, and, with respect,  
19 this is the basis of informed and meaningful  
20 consultation.

21 As a result of all these factors, we are uncertain  
22 how the proponent was able to assess significance of  
23 historic resources within the entire PDA area and  
24 mitigate those impacts in the EIS as we feel there was  
25 significant gaps of knowledge during that time.

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1           Despite these gaps of knowledge, within the EIS  
2           dated to 2018, the proponent states that there are no  
3           residual effects to historic resources within the  
4           project area, and the project effect on historic  
5           resources are assessed as not being significant.

6           When queried about this by the Stoney Nakoda in  
7           their response to the EIS, Alberta Transportation has  
8           pointed out in Appendix J of their reply submission, and  
9           I quote: (as read)

10           "A significant adversus residual  
11           environmental effect on historical  
12           resources is defined in the EIA as one  
13           that results in an unauthorized  
14           project-related disturbance to, or  
15           destruction of, all or part of a  
16           historic resource considered by ACT  
17           (now ACMSW) to be of historic or  
18           heritage value. All or part of a  
19           historical resource --

20           Pardon me -- I skipped a line there: (as read)

21           "...and that is not mitigated or  
22           compensated as required by the  
23           regulators."

24           Alberta Transportation goes on to note that they will  
25           follow the requirements of the regulators and sites will

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1 be mitigated or avoided, and as such, the conclusion of  
2 significance does not change.

3 And I will also let you review that. It's  
4 Appendix J of the Alberta Transportation reply  
5 submission, as I kind of stumbled over those words.

6 Mr. Chair and members of the Board, the practice of  
7 assessing heritage in this way, while in some instances,  
8 is common practice, does not allow for a changing  
9 understanding of cultural heritage significance to occur  
10 within any of the additional HRIAs required to be  
11 undertaken prior to the development of the proposed  
12 project, or through the mitigation process of the  
13 archeological site areas that will be impacted by the  
14 development, or during consultation.

15 It should be noted that this practice has shown to  
16 be detrimental to both Indigenous communities and  
17 industry this past year.

18 Furthermore, mitigation measures that are  
19 identified by the proponent in the EIS, as required  
20 under the *Historic Resource Act*, are not inclusive of  
21 Stoney Nakoda perspectives and protocols for land  
22 management, and the preservation of heritage sites.

23 These requirements elevate scientific knowledge  
24 over traditional perspectives, and are essentially an  
25 exclusionary investigative approach. It is important to



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1 remember that mitigation is also an impact, and  
2 destructive to heritage sites, which are a non-renewable  
3 resource.

4 What has been significantly overlooked in the EIS  
5 is the impact that these mitigation measures will have  
6 on the Stoney Nakoda people as archeological sites or  
7 historic resource sites, as we also call them, are of  
8 high significance to Stoney Nakoda.

9 The need for a broader understanding of Indigenous  
10 perspectives in relation to conservation and  
11 preservation is always required. In order to accurately  
12 assess the values contained within historic and heritage  
13 places and spaces, and these elements have long been  
14 recognized and are presented within ICOMOS's Nara  
15 document on authenticity.

16 And while the proponent has noted multiple times  
17 that they will follow the requirements issued by ACMSW,  
18 which is essentially all that they need to do to comply  
19 with the *Historic Resource Act*, we note that these  
20 requirements are the basic requirements that the  
21 proponent is mandated to undertake to development --  
22 prior to development.

23 These requirements can be built on to accommodate  
24 cultural protocols and assessment techniques and can  
25 holistically and respectfully mitigate impacts to

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1 cultural heritage that honour both Indigenous and  
2 scientific perspectives, and that speak to obligations  
3 required of all signatories of the UNDRIP.

4 Because the project area is both archeologically  
5 and culturally significant, an informed assessment by  
6 the Stoney Nakoda in conjunction with finalizing the  
7 HRIA and mitigation requirements and dialogue with the  
8 nations will fully allow for the proponent to understand  
9 the impacts to historical resource site areas this  
10 project will have, and to accurately assess the  
11 development -- and develop, pardon me, inclusive  
12 mitigation measures that could help reduce residual  
13 effects to historic resources within the project area.

14 Thank you.

15 THE CHAIR: Thank you, Dr. Berry.

16 MS. LOUDEN: Thank you, Ms. Berry. Yes, thank  
17 you to the entire Stoney Nakoda panel, the elders and  
18 the consultation officers.

19 I believe we'll ask you to stand by, Mr. Chair. I  
20 think now would be an appropriate time for a break, and  
21 then the Panel will be available for cross-examination.

22 THE CHAIR: Thank you. And a break works  
23 perfectly right now, so thank you for that. And thank  
24 you to your panel as well. Let's return at 10:45,  
25 please.

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1 MR. KRUHLAK: Mr. Chairman, I wonder if we might  
2 have a bit more time. I've got to make a few calls.

3 COURT REPORTER Who was that?

4 MR. KRUHLAK: Sorry, it's Ron Kruhlak,  
5 Madam Reporter.

6 THE CHAIR: Any objections? How much time  
7 would you request?

8 MR. KRUHLAK: Well, I think -- I'm just going to  
9 propose 20 minutes instead of the regular 15, sir.

10 THE CHAIR: Yeah, 10:50.

11 MR. KRUHLAK: Thank you.

12 THE CHAIR: Thank you, everybody. See you in  
13 a bit.

14 (ADJOURNMENT)

15 THE CHAIR: Just a couple of prelim things  
16 here. I'm just trying to find -- I think -- oh, sorry,  
17 my sound's shut off. That's what's going on.

18 Sorry, Mr. Kruhlak, you perhaps responded. I  
19 didn't hear you because my sound --

20 MR. KRUHLAK: Yes, I'm back, Mr. Chairman.

21 THE CHAIR: There you go. Okay. And I'm  
22 assuming that Mr. Secord -- Mr. Williams I think has  
23 already mentioned he will not be crossing. And  
24 Mr. Wagner, I don't assume that you'd have any cross  
25 here or -- do I have that right?

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1 MR. SECORD: I don't have any cross for the  
2 SNN. Thank you, sir.

3 THE CHAIR: Okay, so I think we can get  
4 started with Ms. Sendin (phonetic), City of Calgary, or  
5 Senek, sorry.

6 Ms. Senek, did you have any questions?

7 MS. SENEK: Thank you. No, Mr. Chair, the  
8 City doesn't have any questions. Thank you.

9 THE CHAIR: Okay, thank you. And Mr. Cusano?

10 MR. CUSANO: No questions. Thank you, sir.

11 THE CHAIR: Mr. Kruhlak.

12 MR. KRUHLAK: Thank you, Mr. Chairman.

13 **MR. KRUHLAK CROSS-EXAMINES THE PANEL:**

14 Q. On behalf of Alberta Transportation, I'd first like to  
15 thank the Stoney Nakoda Nations' elders for their  
16 comments and for their participation in their evidence  
17 this morning. And I would like to specifically thank  
18 Elder Holloway for his offer to perhaps be involved in  
19 some further assessment work that has been identified  
20 that the Stoney Nakoda Nations would like to undertake.

21 I want to just ask a couple of questions of you,  
22 Mr. Snow, in your review and comments. Have you had a  
23 chance to review some of the additional commitments  
24 that Alberta Transportation has made in identifying  
25 some of the recommendations or responding to the

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1 recommendations in the interim assessment report that  
2 you provided.

3 A. MR. W. SNOW: Good day. I have heard -- I've  
4 been listening in on the proceedings of this hearing.  
5 I've heard the comments by Alberta Transportation. I  
6 don't know that I've heard the totality of all of those  
7 comments as, from time to time, my work with  
8 consultation is ongoing, and I have to split my time  
9 between this and other activities.

10 I have heard some of the comments; I don't know if  
11 I've heard all of them.

12 Q. And in particular, I guess, Alberta Transportation has  
13 indicated that it would be pleased to work with the  
14 consultation office to have the interim land use  
15 assessment completed to assist the Stonies in preparing  
16 a final report. That was advised.

17 There was also some discussion, Mr. Snow, about  
18 the guiding principles for land use, which would enable  
19 First Nation communities to participate in being able  
20 to look at the land use for the area to continue to  
21 exercise their rights.

22 And in that regard, I was wondering if you're  
23 aware whether you could express whether or not the  
24 Stoney Nakoda Nations would seek to participate in the  
25 First Nation land use advisory committee that would

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1           oversee activities and how the land use is to be  
2           undertaken?

3       **A. MR. W. SNOW:**           Thank you, Mr. Kruhłak.

4           I don't -- I'm not sure at this point. I think  
5           that is a question for the Stoney Nakoda leadership of  
6           the Bearspaw, Chiniki, and Wesley First Nations.

7           As you may recall, May 6, 2019, was the date of  
8           the letter of objection for this particular project and  
9           a few others regarding dams.

10       **Q.** I wanted to ask a question or two about the concerns  
11       expressed about the site visits for consultation. I  
12       can say that we -- Alberta Transportation was not aware  
13       of those concerns until they received the  
14       correspondence from the Stoney Nakoda Nations on  
15       February 26th of this year.

16           And maybe, Mr. Goodstoney, you could help me out  
17       here, as you were on site and discussed what you  
18       observed. I couldn't find any reference to those  
19       problems in a letter or meeting minutes from 2016 until  
20       we heard of it in February 26 of 2021.

21           Mr. Goodstoney, do you recall if there was any  
22       letters or communications about the problems  
23       experienced in the field site visits?

24       **A. MR. GOODSTONEY:**       Well, this is -- I would have to  
25       reply by saying that, you know, I would have to confirm

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1 my office to give you an answer. You know, I don't  
2 want to mislead anyone.

3 Q. Fair enough. You don't recall personally writing a  
4 letter or making a phone call to people at Alberta  
5 Transportation, outside of the people that you dealt  
6 with at the site visit itself?

7 A. MR. GOODSTONEY: Can you repeat the question?  
8 Sorry.

9 Q. Sure, it might have been a little garbled. You don't  
10 personally recall writing a letter complaining about  
11 the site visit or identifying some of the problems with  
12 it to Alberta Transportation after the event?

13 A. MR. GOODSTONEY: Well, the person that I would  
14 communicate with would be Bill, and he -- he -- he  
15 would be the first to receive whatever information  
16 after the site visit.

17 Q. And Mr. Snow, I guess just asking you, we haven't been  
18 able to find an actual form of communication about the  
19 problems that were identified on the site visit  
20 after -- after it occurred in the fall of 2016. Do you  
21 remember issuing any sort of letter?

22 A. MR. W. SNOW: I do not recall a letter.

23 One thing that I would point out to the Chair and  
24 to the Board is that we have come across this type of  
25 situation previously in other -- we've had issues with

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1           proponents on other consultation projects. But  
2           typically, it's the -- a proponent may engage in some  
3           kind of activity, and then we have an incident. And  
4           then for that kind of situation, we, as a First Nation,  
5           would turn to the regulator for assistance.

6           But in this case, the incident came from the  
7           regulator, from the government. So it's a very --  
8           there's no set rule around how this kind of situation  
9           is handled under the current Aboriginal consultation  
10          policy. There's no set way. Like, there's many  
11          problems with the policies since it came into effect in  
12          2005, and it hasn't changed a whole lot since then.

13          So there is -- there's a lot of missing processes  
14          at play in our current system.

15          Q. Thank you, Mr. Snow. I was -- I guess I'm asking  
16          because Alberta Transportation would have liked to  
17          address this issue earlier if possible, and -- and  
18          certainly we would have liked to address it before  
19          having to wait, you know, four to five years. But, as  
20          we've indicated in the recommendations, that once you  
21          have an opportunity to review those, it can hopefully  
22          be addressed.

23          Mr. Goodstoney, if I could ask another question of  
24          you, and I think you identified that the site work --  
25          that this was a pretty unique situation; is that sort



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1 of fair?

2 **A. MR. GOODSTONEY: Yes.**

3 **Q.** And is it also fair to say that typically when you  
4 undertake site visits, which I understand you do a fair  
5 amount of, you're on Crown land?

6 **A. MR. GOODSTONEY: I believe so.**

7 **Q.** And this would be a more unique situation where the  
8 access would be having to be dealt with by access  
9 agreements with the private landowners which may  
10 restrict where you can go and when you can go. Were  
11 you aware of that?

12 **A. MR. GOODSTONEY: I was informed that it -- under**  
13 **landowner's direction on where to go. I'm not sure of**  
14 **the agreements.**

15 **Q.** Fair enough. And I just thought I'd ask because I  
16 understand the detour or trip to Our Lady of Peace  
17 memorial which -- or marker was not appreciated.

18 Do you recall any sort of explanation that part of  
19 that is that that area is actually identified very  
20 clearly on a map for gaining a perspective in the area,  
21 and it's also of high elevation at a point where you  
22 can see the proposed diversion canal and project  
23 development area?

24 **A. MR. GOODSTONEY: No, as I recall, there wasn't**  
25 **clear explanation why we were there. We parked**

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1 directly in front of the monument, and we -- if I can  
2 remember correctly, I think it was gates where we had  
3 to enter into the monument. So it was direct -- it was  
4 directly into the monument. And the stay there wasn't  
5 very long.

6 Q. And you indicated that what you would expect to see to  
7 be able to complete a final traditional land use  
8 assessment would -- you'd need to be going out there,  
9 and that's something that's best suited to be done in  
10 the summer months?

11 A. MR. GOODSTONEY: Yes, it would have been -- that's  
12 what was preferred, and the weather wasn't -- wasn't  
13 ideal, you know. But in wintertime, fall, almost  
14 everything's the same colour, but springtime,  
15 summertime, it's pretty much ideal and preferred.

16 Q. Thank you, Mr. Goodstoney.

17 Dr. Berry, just had a couple of brief questions  
18 for you with respect to some of your comments. Have  
19 you testified before, before any Board or tribunal in  
20 Alberta?

21 A. MS. BERRY: No.

22 Q. And I understand from your résumé, which was tendered  
23 as Exhibit 343, you've been assisting the Stoney Nakoda  
24 Nation since July of 2020?

25 A. MS. BERRY: Yes.

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1 Q. And was it brought to your attention that there was an  
2 invite extended to the Stoney Nakoda Nations in July of  
3 2020 to attend to observe archeological work that would  
4 be undertaken on the project site?

5 A. MS. BERRY: Yes, I was aware of that.

6 Q. And did you attend?

7 A. MS. BERRY: No, as it was during a pandemic,  
8 and I believe that they were under consultation pause  
9 during that time period.

10 Q. So you weren't able to attend. Have you ever attended  
11 the site, any area of the project development area?

12 A. MS. BERRY: No.

13 Q. So it's fair to say that your reviews have largely  
14 been, at this time, desktop?

15 A. MS. BERRY: Yes, I am familiar with the area  
16 as you drive through it to get to Cochrane, but that's  
17 my familiar -- familiarity with the site area, yes, and  
18 a desktop review.

19 Q. And have you obtained a copy of the historic resources  
20 impact assessment that was prepared?

21 A. MS. BERRY: Yeah, from 2016, I have. I  
22 obtained it off of OPaC, and I understand that there  
23 was another permit pulled in 2020, but that report is  
24 not available as of yet.

25 Q. And you're aware that Alberta Transportation has to

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1           adhere to the *Historic Resources Act* with respect to  
2           distributing reports?

3       **A. MS. BERRY:**               Yes, absolutely. I completely  
4       understand that, and I do note that there is an  
5       archeological -- archeological survey information  
6       bulletin that is available on the archeological survey  
7       website that is dated to March 1st, 2020, which speaks  
8       to the dissemination of information. So as  
9       archeologists, we are under a confidentiality agreement  
10      when we obtain that information. And so we do not  
11      disseminate that information to any third party, but we  
12      are able to use it to undertake our assessments.

13      **Q.** And have you made a request to Alberta Culture for that  
14      report?

15      **A. MS. BERRY:**               No, I have not. I -- I reviewed  
16      it for an assessment. I did not disseminate any  
17      information to any third party.

18      **Q.** Thank you, Dr. Berry. If you could --

19      **MR. KRUHLAK:**               Mr. Chairman, I'm just going to  
20      check my notes here. I'll be a few minutes, if that's  
21      all right.

22      **THE CHAIR:**                Absolutely. Yeah, that's fine.

23      **MR. KRUHLAK:**               Thank you, Mr. Chairman, and I  
24      also want to thank all of the witnesses for the Stoney  
25      Nakoda Nations for the information and the

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1 presentations that we received this morning.

2 THE CHAIR: Good. Thank you, Mr. Kruh1ak.

3 So Ms. Louden, Mr. Snow, we may have a few  
4 questions from Board staff and Panel members.

5 Ms. Vance, do you have any questions?

6 MS. VANCE: Thank you, Mr. Chair. I don't  
7 have any questions.

8 THE CHAIR: Mr. Kennedy? Oh, you're on mute,  
9 I think. No, still -- still nothing. Your headset  
10 hasn't been -- no.

11 MR. KENNEDY: How's that?

12 THE CHAIR: Ah, there we go.

13 MR. KENNEDY: The solution at hand, I just keep  
14 working at it. After all that, I do not have any  
15 questions. Thank you.

16 THE CHAIR: All right. Thanks, Mr. Kennedy.  
17 Mr. Ceroici?

18 MR. CEROICI: I don't have any questions. Thank  
19 you.

20 THE CHAIR: Ms. Roberts?

21 MS. ROBERTS: No questions, thanks.

22 THE CHAIR: Mr. Heaney?

23 MR. HEANEY: No questions.

24 THE CHAIR: And, Mr. Snow, I just had one  
25 quick question.

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Questioned by The Chair

1     **THE CHAIR QUESTIONS THE PANEL :**

2     Q.   And we've from -- this morning from your panel that  
3         there was some uncomfortable situations, as you  
4         described them, or as others have described them, just  
5         in terms of some of the interactions. My question  
6         isn't really going to go deeper into that, but more --  
7         is there -- or do you -- with other proponents, and  
8         then even with Alberta Transportation, because you  
9         mentioned this has happened with other proponents as  
10        well, but when you're conducting site visits, was there  
11        sort of a pre-meeting or pre-site visit meeting that  
12        sort of explains the process that the Stoney Nakoda  
13        elders, in particular, would like to -- how they'd like  
14        to conduct their site visits, confidentiality, giving  
15        them space, that sort of thing -- are those sort of  
16        rules of engagement or practices outlined with  
17        proponents?

18    A.   **MR. W. SNOW:**            I believe perhaps Chris --  
19         Mr. Goodstoney can confirm, but I believe there were  
20         morning meetings every morning that were held. I did  
21         not take part in the fieldwork by myself, but from my  
22         understanding is that there were morning meetings that  
23         were held prior to the group going out onto the  
24         landscape.

25                 Chris, can you -- do you have anything to add to

## STONEY NAKODA NATIONS TOPIC #2 PANEL

Questioned by The Chair

1           that?

2       A.   MR. GOODSTONEY:           Yes, yes. With this particular  
3       project, we did have morning meetings. We consider  
4       them -- some proponents call them "tailgate meetings."  
5       Sometimes we go over safety and all that stuff, and the  
6       maps that were provided we reviewed. And wherever the  
7       land access has been confirmed, we would go to these  
8       sites, you know.

9                   And basically from a map -- from a map's  
10       perspective in being physically out in the field is  
11       very much different to determine exactly where we want  
12       to go, and so we were told by the -- we're informed by  
13       the proponent what the day schedule would be and that's  
14       how we went about. But yes, Mr. Chair, we did have  
15       morning meetings.

16       THE CHAIR:                   Fair enough, thank you. Thank  
17       you. That's all the questions I have, and I would also  
18       like to thank the panel for the presentations and the  
19       time that you took to relay that information this  
20       morning.

21                   Ms. Louden, do you have any redirect?

22       MS. LOUDEN:                   No, Mr. Chair. We do not have any  
23       redirect. I will just point out, as well, though, that  
24       Elder Jackson Wesley, at the beginning, mentioned  
25       perhaps wanting to do a closing prayer.

## SCLG Topic #2 PANEL

Questioned by The Chair

1                   Mr. Snow, Mr. Bill Snow, I'm not sure if you would  
2                   like to do that now to close the sitting of this panel.

3       A.   MR. W. SNOW:            I think -- is -- actually is -- is  
4                   Elder Henry Holloway available? Let me check my --  
5                   with my colleagues.

6       A.   ELDER HOLLOWAY:       Hello.

7       A.   MR. W. SNOW:            (OTHER LANGUAGE SPOKEN) Henry,  
8                   we've come to the end of our presentation, and would  
9                   you be willing to do a closing prayer for us?

10      A.   ELDER HOLLOWAY:       Yes.

11      (OTHER LANGUAGE SPOKEN)

12      A.   MR. W. SNOW:            Thank you, Elder Henry. Thank  
13                   you, Chairman. Thank you to the Board. Thank you for  
14                   listening to our presentation today.

15      THE CHAIR:                   My pleasure. Thank you very much  
16                   again. Thank you for that closing, Elder Henry.

17                   Thanks, Ms. Louden.

18      MS. LOUDEN:                  Thank you.

19      THE CHAIR:                   Thank you.

20                   Mr. Secord, are you ready for direct evidence  
21                   under Number 2, Topic 2?

22      MR. SECORD:                  I am, sir. Just getting my mouse  
23                   to work.

24      THE CHAIR:                   Okay, no problem. Okay, take it  
25                   away.



## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 MR. SECORD: Thank you.

2 K. HUNTER, J. ERISMAN (For SCLG), previously sworn/affirmed

3 MR. SECORD EXAMINES THE PANEL:

4 Q. Ms. Hunter, are you visible?

5 A. MS. HUNTER: Yes, yes, I'm here.

6 Q. MR. SECORD: Great. Ms. Hunter --

7 A. MS. HUNTER: Sorry, Richard, we're just a  
8 little ahead of schedule. So I'm just going to  
9 assume -- just confirm that Ms. Erisman is available in  
10 case someone has a question about historical resources  
11 within the Springbank community. But go ahead.

12 Q. I'll just wait for you to send that text.

13 A. MS. HUNTER: Okay, thank you.

14 Q. Ms. Hunter, do you consider yourself bound by the  
15 oath/affirmation that you previously took prior to the  
16 earlier testimony that you gave in Topic Block 1?

17 A. MS. HUNTER: Yes, I do.

18 Q. And you have also previously adopted your pre-filed  
19 evidence. Your evidence on Topic Block 2 is set out in  
20 Exhibit 354; correct?

21 A. MS. HUNTER: Yes, correct.

22 Q. And document manager, if we could pull up Exhibit 254  
23 and turn to PDF page 114?

24 A. MS. HUNTER: 115.

25 THE CHAIR: And Ms. Hunter?

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1       **A. MS. HUNTER:**                   **Yes?**

2       **THE CHAIR:**                    Just recalling from your past  
3       testimony, just speak a little slowly or more slowly  
4       than maybe you're perhaps used to, just for the court  
5       reporter. Thank you.

6       **A. MS. HUNTER:**                   **Thank you for the reminder. I**  
7       **will do my best.**

8       **Q. MR. SECORD:**                And with respect to -- to this  
9       page, do you have a correction that you would like to  
10      make to your -- to Exhibit 254?

11      **A. MS. HUNTER:**                **Yes, I do. I apologize, I'm**  
12      **directionally challenged. This is the north-west**  
13      **corner of the project.**

14      **Q.** Thank you. And would you please, and if we could have  
15      you -- have the document manager go to PDF page 106,  
16      and Ms. Hunter, if you would please provide an overview  
17      of the SCLG's concerns regarding land use Topic  
18      Block 2?

19      **A. MS. HUNTER:**                **Sure, and we don't need to go**  
20      **through this whole presentation. I'm going to hit on**  
21      **just a few pages actually, starting at page 110, 110 of**  
22      **Exhibit 254. My understanding is the Panel has read my**  
23      **submissions, so I just will use this to clarify and add**  
24      **to some context.**

25                    **So thank you, Panel, for your time once again**

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 today. I'm here to speak about land use.

2 In advance, I'm going to just mention that this  
3 map, just to clarify, I think there was some confusion  
4 the other day, and there was confusion on my part also.  
5 This map was created by SCLG using an overlay of the  
6 project footprint from the proponents's submissions  
7 onto Google Earth.

8 The intent of this map was for us as a community  
9 to see where homes and the project footprint was  
10 intersecting with community lands.

11 So my knowledge, this is accurate to plus or minus  
12 a very small degree of error around the footprint. And  
13 I'm not going to be zooming in on any detail today, so  
14 I don't think, you know, we need to debate if this line  
15 needs to be shifted by a little bit or not, but more  
16 than anything, just to show how this yellow line  
17 intersects with our community.

18 I'm just going to start with a couple brief  
19 comments.

20 The proponent is creating new Crown land out of  
21 private land in most cases appearing to be parted from  
22 unwilling sellers, many generational landowners. In  
23 our view, Crown land should be land for all to co-use.

24 Stoney Nakoda earlier today mentioned the  
25 historical trail used by both First Nations and

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 settlers. This trail is intertwined with the history  
2 of Springbank. Stoney Nakoda also mentioned land  
3 originally owned by Clem Gardner. This land is now the  
4 homestead of Tracey Feist who spoke to the SCLG on  
5 Monday.

6 Jan Erisman, a member of the Springbank Historical  
7 Society who also spoke on Monday I believe will be  
8 available to answer questions about the historical  
9 aspects of SR1 in Springbank and some of the concerns  
10 we have in more detail if the Panel so chooses.

11 I have been asked to -- for this Panel to put  
12 forward for consideration as a condition of approval  
13 that historical inventory, of the historical ranching  
14 and homesteading sites impacted by this project should  
15 be performed with all costs of this  
16 inventory-associated restoration and costs of moving,  
17 if applicable, will be provided at the expense of the  
18 proponent.

19 It was amazing to listen to Ms. Berry who spoke  
20 about the cultural history of this land, both of First  
21 Nations and the early settlers which we do not believe  
22 has been seriously considered by the proponent.

23 Land use is mentioned in the Deltares report,  
24 Exhibit 13, and I think there are a couple of things  
25 that are relevant here, Deltares said: (as read)

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1           "SR1 is pastureland, and its use doesn't  
2           change, except during high river  
3           discharges."

4           Obviously I think we know better now; there were two  
5           major errors to this statement. That comment about  
6           "just pastureland" is actually quite an oversight about  
7           the critical mix of ecosystems along this entire massive  
8           footprint that is literally teeming with biodiversity as  
9           it moves from forest through native grasslands and  
10          wetlands.

11          Additionally, according to the new land use plan,  
12          Exhibit 216, by the proponent, there seems to be  
13          wholesale changes in land use from its current use. So  
14          the Deltares statement of land use doesn't change is  
15          quite glaringly wrong at this point.

16          The only explanation for this utterly incorrect  
17          judgment by Deltares is the complete and absolute lack  
18          of understanding of the project, the lands, and the  
19          sediment deposited by floodwaters.

20          Additionally, Deltares did not mention any First  
21          Nations concerns about SR1 in their decision, but stated  
22          at MC1: (as read)

23                 "There would be significant impacts to  
24                 First Nations traditional uses."

25          From the SIA report regarding the SR1 project,

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 Exhibit 163, page 32, I quote: (as read)

2 "There were no recorded historical  
3 values or notable architectural values  
4 present in the McLean Creek option  
5 area."

6 Meanwhile, page 98, regarding SR1, I quote: (as read)

7 "Located within our partially within the  
8 PDA, a total of 14 historic structure  
9 sites and 22 archeological sites were  
10 assessed by the proponent."

11 Suffice it to say, we are living with the unexpected  
12 consequences of these judgments today.

13 I would like to add that the Bragg Creek berms  
14 needed because of the SR1 project decision have created  
15 a canal-like aesthetic impacting how users interact with  
16 the river along Bragg Creek, and that land has already  
17 been impacted and changed in its use as a result of the  
18 SR1 decision. Perhaps if consultations preceded this  
19 decision with both landowners and First Nations, some of  
20 these errors in judgment could have been corrected early  
21 on.

22 In our view, the land use plan for the project  
23 development area is founded on a belief that that  
24 reservoir can be recovered between floods to some sort  
25 of natural state. The reservoir is the largest land use

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 area, so this is important to consider.

2 The state of the reservoir is dependent on, to name  
3 a few: Flood size. Larger floods will deposit more  
4 sediment impacting land use in more material ways.  
5 Flood frequency. If the reservoir goes for a decade  
6 between uses or a year or two, this will create  
7 significant and drastic changes between land uses.  
8 Whether or not there was pre-existing sediment before  
9 the next flood. Drying time. Types of post-flood  
10 remediation activities, including sediment management,  
11 which would include moving and grading of sediment,  
12 application of tackifier and/or reseeding programs,  
13 watering and/or weather systems, and the success of  
14 regrowth programs and regrowth stage, how long does it  
15 take for this reservoir to recover to a point where  
16 traditional use, such as medicinal plant-gathering can  
17 be performed? Does this take one year post-flood or  
18 five or twenty?

19 In non-flood years, the permit-based grazing plan  
20 needs to be vetted by cattle owners to assess interest  
21 and practicality.

22 Fire suppression as we heard from landowners is a  
23 very concerning risk here, and fire suppression  
24 activities may necessarily impact land use, though  
25 grasses will either have to be cut or grazed throughout

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 the reservoir and south of the diversion channel.

2 It will be -- we expect that this will be a popular  
3 new area for recreational users given its proximity to  
4 Calgary and location on the way to Bragg Creek along  
5 Cowboy Trail. We fully expect cars to be parked along  
6 the highway. We expect people to be in that reservoir  
7 once it becomes Crown land. Our view is that public use  
8 should be expected and accommodated accordingly.

9 In a flood year, before a flood, numerous access  
10 questions arise. How will wildlife-clearing activities  
11 impact land use? Will wildlife be deterred from  
12 entering the footprint or cleared earlier in the spring  
13 if forecasts show large snowpack or other early  
14 indicators of flood? How will land be safely evacuated  
15 before a flood? Will any land use be permitted in the  
16 flood season, May and June, at all? Post-flood, when  
17 and how will land access be granted within the  
18 reservoir? After the reservoir is dry? How long is  
19 that? I don't think we have that information. After  
20 sufficient regrowth is established and all remediation  
21 activities have taken place in a portion or all of the  
22 reservoir? Will flooded areas be fenced off or how will  
23 land use be restricted for flooded areas?

24 This will be a dynamic and complex environment to  
25 manage for which the proponent seems to have overlooked



## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 much of the costs. Over time, it is likely that the  
2 land use will change as sediment accumulates and is out  
3 of necessity pushed around by bulldozers to ensure  
4 suitable drainage out of the low level outlet. The  
5 ecosystem will become simplified as discussed by SCLG  
6 expert Cliff Wallis in Topic Block 5. Thus, I question  
7 whether First Nation use, at least of the reservoir over  
8 time, is idealistic, rather than realistic, or perhaps,  
9 whether opportunities for traditional uses are reduced  
10 over time as sediment accumulates. I'm quite sure these  
11 contradictions wouldn't have occurred at McLean Creek  
12 where land use is much clearer as the reservoir is in  
13 the river valley.

14 As far as we can see, SR1 creates land use problems  
15 and challenges that need to be corrected time and time  
16 again.

17 Yesterday, Mr. Secord asked a question about what  
18 the reservoir would look like in 50 years. Mr. Wood  
19 responded, and I'm just going to paraphrase, "We  
20 shouldn't worry too much about sediment because most  
21 floods are small." And he went on to pull up an image  
22 that shows the footprint of a 10-year flood.

23 Mr. Wood also stated the reservoir would have only  
24 been used ten times in the last 100 years. This is  
25 among the most interesting statements of the day to say

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 the least. Mr. Wood, if floods are small, he implies we  
2 shouldn't worry about sediment accumulation. Surely a  
3 small flood such as a 1 in 10 can pass safely down the  
4 river, and perhaps we don't need this project.

5 The proponent is here arguing for the project to  
6 proceed because Calgary needs this flood mitigation  
7 urgently. What is the reality? If you were building  
8 this for the design flood, please consider the design  
9 flood's consequences on the land. The proponent wants  
10 to talk about risk of a big flood, but they don't want  
11 to talk about the environmental consequences of a big  
12 flood.

13 Panel, I ask you to hold the proponent accountable  
14 for these contradictory statements. The worst-case  
15 scenarios for sedimentation and its effects on land use  
16 must be considered for all of us, First Nations, and  
17 public use, and adjacent and surrounding community.

18 If we are to expect various 1 in 10-year floods as  
19 Mr. Wood suggested yesterday, I suggest we go back to  
20 the drawing board and get this right by finding a  
21 project that can address drought. Alternately through  
22 this process, run the simulation on recorded floods over  
23 last 100 years and project what the sediment  
24 accumulation would look like today. You can't have it  
25 both ways.

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 I would also state this project has no end date.  
2 What possible justification could be used to deny  
3 forecasts of sediment accumulation over the next hundred  
4 years? Although we won't be here to see it, the  
5 long-term environmental state of SR1 will impact the  
6 users of the land and the surrounding communities for  
7 generations.

8 If we could go to page 111, please. Thank you.  
9 Although the proponent states the plan is to end up with  
10 3,600 direct acres required by the project, I would  
11 argue, and I think Stoney Nakoda mentioned this, as  
12 well, the full 6,800 and perhaps beyond is impacted by  
13 fragmentation. Fragmentation is a concern for these  
14 contiguous native grasslands around the reservoir, most  
15 of which are in their uncultivated natural states.

16 A brief history is outlined in Exhibit 100, we  
17 don't need to go there.

18 In 2015, the plan was to acquire 1,760 acres for  
19 \$40 million. In 2017, the full footprint was planned to  
20 be acquired for 140 million with an expectation of land  
21 use sales of \$60 million. This projection in 2017  
22 included lease revenue of \$715,000 a year for a total  
23 present value benefit of approximately \$15 million. In  
24 2019, the full value appears to be the whole 140 million  
25 with no resale.

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1           With the caveat in Exhibit 325, page 23, I quote:  
2           (as read)

3           "Finally, to the extent that AT is able  
4           to offset land acquisition costs by  
5           reselling excess lands, it will do so."

6           In 2019, lease revenue seems to be removed.

7           I would add as an aside that I think relevant,  
8           material amounts of private land in Bragg Creek were  
9           acquired for the berming project along the river. Land  
10          costs were never considered for these berms when SR1 was  
11          chosen. The direct cost of Bragg Creek berms was purely  
12          for the construction alone.

13          This is a big component to the cost escalation,  
14          land is, of the Bragg Creek berms from 8.9 million to  
15          \$42 million. So this project has impacted lands far  
16          beyond the SR1 footprint.

17          Based on responses from the proponent yesterday, it  
18          doesn't seem that they know whether or not they are  
19          acquiring or will need to acquire the full 6,800 and/or  
20          will need to sell back excess or whether they'll be able  
21          to directly to acquire this unusual 3,600-acre footprint  
22          that has been created by elevations. This will only be  
23          known as the project is approved and land acquisitions  
24          finalized was what I heard yesterday.

25          However, I do believe this is an overlooked

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 element. If smaller parcels are created by SR1, excess  
2 land acquisitions and resale, this will further fragment  
3 that 6,800. We agree with Stoney Nakoda that this  
4 impacts the broader area, and there will be further  
5 impacts to biodiversity.

6 As one of the landowners stated on Monday, native  
7 grasslands areas are threatened. If larger parcels or  
8 purchased and then resold into smaller parcels which  
9 will then have homes, driveways, yards, barns, fences,  
10 animals, this will result in further loss of these  
11 grasslands and further fragmentation. What I am saying  
12 is that there are implications beyond the project  
13 development area's 3,600 acres which depends on future  
14 land acquisition, and this has not been considered by  
15 the proponent. This is yet another example of how much  
16 uncertainty remains and how narrow the frame of  
17 reference continues to be.

18 In 2020, the proponent stated new land access would  
19 be provided for ten residences. I am totally unclear on  
20 how it took the proponent six or seven years to figure  
21 that out. I can see looking at Brian Copithorne, he  
22 needs a new access. Where will this access come from?  
23 It takes more private land. There must be easements  
24 from private land to get to Brian's home.

25 Page 119, please. Oh, and just briefly on that

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 page, I just wanted to note that those are two homes  
2 that have been circled on page 111, I apologize. That's  
3 a mother and a daughter that will be separated by the  
4 diversion channel, just for reference.

5 So page 119, thank you. What is utterly missing  
6 from this land use plan as we discussed yesterday is the  
7 intersection of the PDA and the adjacent lands. Again,  
8 we realize this is somewhat dependent on land  
9 acquisitions and the preferences of individual  
10 landowners. I ask the Panel and the proponent to  
11 consider the following questions: What tools can be  
12 employed to create an attractive, sustainable, visible  
13 boundary across the project area?

14 The current boundary, the line provided by the  
15 proponent around the project, does not appear to  
16 contemplate any buffer between SR1 and the private land  
17 that will surround it. How does this work across  
18 jagged, crooked, winding outlines? I do not know how  
19 you can fence that. I do not know how people live with  
20 that and what that looks like.

21 Public use should have a setback from private use.  
22 Landowners should not need to worry about trespassers or  
23 hunters entering private property. Landowners should be  
24 protected to the proponent's -- the best of the  
25 proponent's abilities from harm created by living next

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 to these public lands and their uncertain future uses.

2 If the project should be approved, a condition of  
3 budget for implementation of a suitable aesthetic and  
4 sustainable buffer, ideally bioengineered zone between  
5 public use and private land should be provided, along  
6 with a provision for maintenance. On this page in  
7 particular, this -- the purple part is the diversion  
8 channel and then the off-stream dam.

9 And so what I want to highlight is this little --  
10 how do I explain it? The emergency spillway is coming  
11 up from the left-hand of the screen up to the top, and  
12 it juts out there where the diversion channel is. This  
13 is not intended to be an exact replica of Alberta  
14 Transportation's spillway; it's more to say how is the  
15 water going to access the river when it exits the  
16 spillway.

17 As far as I can tell, the project development area  
18 has changed. In 2016, the project development area went  
19 straight down to the river and abutted the river's edge.

20 This one in 2018 and 2020 seems to show that the  
21 project land stops short of the river, which would  
22 necessitate when the emergency spillway is activated,  
23 water running down there and across private land. And I  
24 just -- I'm not sure how that works, and I don't know  
25 that's a reasonable assumption. Perhaps something to be

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 explored further.

2 And with that, I'm done referring to my slides.

3 I'm going to speak briefly about engagement for  
4 land use planning.

5 I've been giving a lot of thought to this concept  
6 of land use and engagement. We are caught in a cycle on  
7 this project beginning in 2014 where the proponent makes  
8 decisions, and we are the last to know. By the time we  
9 found out -- find out, it is too late to participate  
10 constructively.

11 Mr. Wagner asked whether landowners were consulted  
12 before the project was selected. My review of the  
13 history shows the answer is no. Unfortunately, we are  
14 forced to participate on the back-end through comments  
15 to regulators, and ultimately, we end up where we are in  
16 the position we are today.

17 I will admit this is an unhealthy dynamic. This  
18 has been the way since 2014 and has been the source of  
19 much angst and frustration within our community.

20 Even some time was spent on this issue yesterday of  
21 consultation and land use, I would like to contrast SR1  
22 with the engagement on the Bow River dams for which the  
23 community of Springbank is impacted.

24 In between 2018 and '20 following a screening of  
25 over a dozen projects or so, AEP performed conceptual



## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 assessments of three Bow River dam options that was over  
2 a two-and-a-half-year period. This included extensive  
3 public engagement with affected stakeholders, including  
4 water co-ops, Glenbow Ranch Provincial Park, community  
5 members, railroads, and more. At these engagement  
6 sessions, much new information, context, and concerns  
7 were raised early in the process. Ultimately, this  
8 should result in a better outcome for all.

9 The next phase, detailed feasibility analysis which  
10 begins this year, will be conducted on all three  
11 projects until 2023. Feasibility analysis includes a  
12 detailed geotechnical, hydrological, and environmental  
13 study and further community consultations which is where  
14 I would say perhaps where we are with SR1 is having  
15 completed those just now.

16 On the Bow River, only then after all of that  
17 fulsome analysis will one be selected. This is a  
18 pragmatic and conservative approach. This is a far cry  
19 from what happened with SR1 which appears to be a  
20 decision taken fully within the government in a matter  
21 of months and without these critical hydrological,  
22 environmental, or geotechnical assessments.

23 Perhaps if extensive engagement had been conducted  
24 like on the Bow River, the proponent would have known  
25 about Calalta's water rights, the challenges of

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1           Kamp Kiwanis, or the challenges of debris, the  
2           complexities of the pipelines, and early indications  
3           landowners were not willing sellers. There's no way to  
4           remedy these engagement shortfalls now, and in the end,  
5           the costs of the project and the frustration levels are  
6           both high.

7           I am pleased that AT consulted extensive  
8           negotiations with First Nations. We value First Nations  
9           rights. First Nations and landowners have both been  
10          stewards of this land over time; however, I would think  
11          it's fair to say there's been an imbalance.

12          I would ask where are the workshops with our  
13          community that actually surround this footprint in its  
14          entirety?

15          AT responded yesterday, Mr. Hebert reached out me  
16          for consultation with Springbank. I want to speak for a  
17          moment about that and engagement with our community in  
18          particular.

19          Regarding Exhibit 327 where emails sent to me my  
20          Mr. Hebert are listed, I do not consider emails to me  
21          consultation; I consider them updates. Emails to me do  
22          not discharge AT's obligation for public engagement. In  
23          fact, I first heard about the information sessions  
24          hosted by AT last fall in Springbank from our MLA, not  
25          Mr. Hebert. Mr. Hebert advised me of the Springbank

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 session on September 24th, four days before the event of  
2 September -- sorry, advised me of the Springbank session  
3 on September 20th, four days before the event which  
4 occurred on September 24th.

5 Immediately I posted these sessions on our Facebook  
6 page as events in order to raise awareness within our  
7 community; however, I am not responsible for AT's public  
8 consultation in Springbank. It is not my role to take  
9 on the proponent's engagement of Springbank residents.  
10 I am more than happy to share our engagement  
11 opportunities as I have done if they are organized by  
12 the proponent.

13 Regarding the open houses that have occurred over  
14 the years, having an information session where boards  
15 are available for people to peruse and then they are  
16 invited to drop questions in a shoebox does not  
17 discharge AT's obligation of public engagement.  
18 Meanwhile, it is the community that first raised the  
19 issue of debris through this very process, long before  
20 the proponent identified the issue.

21 The only public Q and A sessions were held in 2020  
22 in the fall in what I would assume to be an attempt to  
23 prepare for this Panel in order to say engagement was  
24 conducted. The events, while well attended thanks to  
25 the Springbank and Bragg Creek Community Associations

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 sharing of information, putting up signs, and sending  
2 emails to promote the event, many questions went  
3 unanswered as there was not enough time for all the  
4 questions which had built up over years.

5 Unfortunately, years of poor engagement cannot be  
6 undone and will leave a bad taste in this community for  
7 years into the future if this project is approved. The  
8 frustrations expressed yesterday by Mr. Wagner are  
9 echoed by our community. I would suggest public trust  
10 has been eroded.

11 Regarding the specific set of emails sent to me  
12 mentioned in Exhibit 327, I have a few points to make in  
13 clarification.

14 Firstly, I assumed other members of the public were  
15 receiving these what I would call email updates. I am a  
16 volunteer, mom of four kids, running a community  
17 association with more on our to-do list than SR1.

18 Regarding an email dated June 13th, 2009, "Update  
19 on Regulatory Process": (as read)

20 "Karin Hunter of the SCA attended, as  
21 did representatives of Rocky View  
22 County. SR1 project representatives  
23 provided an update regarding the SR1  
24 project."

25 Until I arrived at the venue, I didn't know no one else

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 from the community was invited, as far as I'm aware.  
2 There were no landowners, and to my knowledge, based on  
3 inquiries to affected landowners, they weren't invited.

4 On page 7 of that same exhibit, Mr. Hebert stated:  
5 (as read)

6 "The UCP was the second government to  
7 reaffirm the project in 2019."

8 I take issue with the term "reaffirm," which is  
9 categorically false. I believe Mr. Hebert referenced  
10 this again yesterday in his testimony. I think what  
11 Mr. Hebert refers to is an independent report by  
12 Martin Ignasiak from 2019, which was promised by  
13 Premier Kenney in the election.

14 The scope of the review by Mr. Ignasiak was not  
15 released publicly, so we did not know what the scope  
16 was, whether it was in fact an impartial review of the  
17 project in its entirety or something else.

18 In a 2019 email to me, page 13, Mr. Hebert  
19 indicated this report was going to be released and let  
20 me know of an upcoming press event later that week. At  
21 any rate, the release of the report was cancelled  
22 without explanation. Then the report was withheld  
23 nearly an entire year until 2020 after the Tsuut'ina and  
24 Rocky View County withdrew their opposition under secret  
25 agreements with AT.

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1           When the delay on the report became apparent, we  
2           tried to access the document through a freedom of  
3           information request, but it was denied. Why was the  
4           information withheld?

5           When it was finally released in 2020, the scope of  
6           the Ignasiak report became apparent. Exhibit 275,  
7           page 129, the report was as follows, quote -- the  
8           purpose: (as read)

9           "Conduct an independent review of SR1's  
10          current status in the regulatory  
11          process."

12         To be clear, they did not hire an independent dam expert  
13         to determine if this was the best project; they hired an  
14         independent regulatory lawyer to determine how best to  
15         expedite the project. This was not a report on the  
16         merits of the project, nor its effectiveness as a flood  
17         mitigation tool.

18         So the project was not reaffirmed at all; rather,  
19         the intent of the report was to provide the proponent  
20         with a specific list of instructions on how best to move  
21         the project forward by: (as read)

22         "Providing an opinion on the regulatory  
23         steps remaining, as well as potential  
24         timelines for completing the regulatory  
25         process."

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 The Ignasiak report outlines the EIA's submission,  
2 process was mismanaged in 2017 by Ignasiak: (as read)

3 "In my view, the requirement to resubmit  
4 the EIA resulted in a delay of the  
5 regulatory process of approximately six  
6 months. Stantec advised AT not to file  
7 the EIS on October of 2017 on the basis  
8 there was insufficient time to  
9 incorporate necessary information in the  
10 EIS, and it would likely be rejected by  
11 SIA."

12 Continuing: (as read)

13 "I understand external legal counsel  
14 also expressed concerns that the EIS was  
15 not ready to be filed. I'm not aware  
16 who made the decision to file the EIS,  
17 despite these warnings, or why."

18 Also, in the Ignasiak report as it pertains to the FAR  
19 process, I quote: (as read)

20 "The number of information requests in  
21 SIR1 is unprecedented. I have worked on  
22 large-scale mining projects which  
23 include processing facilities and  
24 engaged far more environmental  
25 disciplines than SR1 that were subject

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1                   to less than half as many information  
2                   requests in the first round."

3                   Following the first round of IRs in June 2018 --

4       THE CHAIR:                   Ms. Hunter.

5       A.    MS. HUNTER:                Yes?

6       THE CHAIR:                   You've started to speed up again.

7       A.    MS. HUNTER:                Oh, I'm sorry, I'm sorry.

8       THE CHAIR:                   The court reporter's been going  
9                   all morning so her fingers are going to be a little  
10                  tired.

11      A.    MR. HUNTER:                I'm sorry, and I'm just about  
12                  done.

13                   Following the first round of IRs in June 2018, it  
14                   took Alberta Transportation a full year to respond. I  
15                   repeat, a full year.

16                   In June 2019, Minister McIver had a press  
17                   conference to tout the thousands of pages of responses.  
18                   The fact that it needed thousands of pages of responses  
19                   speaks volumes about the quality of the project work to  
20                   that point in time. In our view, a project approved in  
21                   2015 did not have sufficient detail to understand the  
22                   impact until mid-2019 thanks to detailed questioning by  
23                   the NRCB.

24                   The draft land use plan came in October of 2020  
25                   via an email from Mr. Hebert for which I sent a reply



## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 to Mr. Hebert with my personal views and commented to  
2 SIA on behalf of the community association.

3 In closing, in Exhibit 325, the proponent stated:  
4 (as read)

5 "...that the land use plan for the  
6 project area has not been finalized and  
7 will be the subject of further and  
8 ongoing consultation consistent with the  
9 draft land use principles for the  
10 project. The members of the SCLG will  
11 have an opportunity to participate in  
12 that consultation and provide input into  
13 the land use plan."

14 Yesterday Mr. Hebert stated to Mr. Secord that there is  
15 no budgeted -- budget for public amenities associated  
16 with SR1.

17 Might I say the MC1 report included replacement of  
18 affected park infrastructure, including campsites and  
19 wastewater stations. This is yet another imbalance in  
20 the decision. Lack of public amenities seems like quite  
21 a large oversight on a project of this magnitude.

22 We maintain SR1 is a lost opportunity to contribute  
23 to the economy and sustainability of Alberta through  
24 water management and complimentary land uses.

25 Exhibit 198, Appendix B, lists examples of how other

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 water projects provide a range of ancillary benefits,  
2 conventional dams, Gleniffer Lake, Ghost Lake, Little  
3 Bow, to name a few, include the following positive  
4 benefits: Camping, beaches, canoeing, kayaking,  
5 paddleboarding, picnic tables, and day use areas,  
6 fishing, to name a few.

7 Panel, if you approve this project, we ask that a  
8 condition of a generous budget for public amenities  
9 and/or community benefit be included. The precedent set  
10 so far by community engagement is concerning. Unless  
11 engagement is required by this Board with funding for  
12 public works required by this Board, nothing redeeming  
13 about this project with a directly affected community  
14 will be provided. As with our detour roads, those  
15 things would be excluded for budgetary purposes.

16 The proponent has shown disregard for our  
17 community, and so the regard must be formally created.  
18 I have always said, if this project proceeds, get it  
19 right.

20 I realize community amenity requests may be in  
21 conflict with what First Nations is requesting. We have  
22 been at the bottom of the priority list to say the  
23 least. I have no idea at this point how that will be  
24 resolved. There's much uncertainty on the land itself,  
25 along with conflicting agendas. How will these

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 conflicting agendas be addressed? How will these  
2 competing uses evolve over time?

3 The proponent appears to punt these decisions down  
4 the road for AEP to figure out. This leaves all of us  
5 in a state of flux. While we support First Nations  
6 traditional uses, the Springbank community surrounds  
7 this project in its entirety. If you cannot find it  
8 within your decision to provide community benefit  
9 related to land use of SR1, our community would  
10 appreciate the Panel provide an alternate public benefit  
11 for our affected community.

12 The irony here is that new public benefit requires  
13 new costs which are not listed anywhere as Mr. Hebert  
14 stated yesterday. To make it better, to make it more  
15 palatable, you must spend more money, and SR1's  
16 benefit-cost ratio falls farther below that of the  
17 alternative at MC1.

18 So as you can see, this is a vicious circle, and  
19 we're chasing our tails.

20 Mr. Secord proposed a list of conditions for  
21 community benefit yesterday to Mr. Hebert for  
22 consideration. Regarding this line of questioning, to  
23 be honest, I feel physically ill. These questions imply  
24 that if we get community benefit, we're okay with this  
25 project. We are not okay with this project.

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1           The terrible lasting negative outcomes, and in  
2 particular, concerns about our water and air quality,  
3 the safety and health of our community over the long  
4 run, they far outweigh any desirable community amenity.

5           That is why we are here at the end of this process.  
6 In our view, the worst possible outcome is this project  
7 moving ahead. We would happily forfeit any and all  
8 public benefits discussed yesterday and today for this  
9 project to be rejected. Yet out of necessity, due to  
10 the uncertain outcomes of these proceedings and with a  
11 heavy heart, I must advance these proposals for your  
12 consideration. Sorry.

13           I understand that often NRCB approves projects with  
14 conditions, and if that is the case here, I have no  
15 doubt the proponent will continue their relentless and  
16 misguided pursuit of this project at any cost to address  
17 a time crunch for flood mitigation they themselves  
18 created when they chose the wrong project without  
19 appropriate due diligence.

20           Nonetheless, my point today is that there remains  
21 much work to be done on land use and with substantial  
22 cost. I provide this testimony as one more example that  
23 this project should not be approved by this Panel.

24           Thank you.

25       THE CHAIR:                           Thank you, Ms. Hunter.

## SCLG TOPIC #2 PANEL

Examined by Mr. Secord

1 Mr. Secord?

2 MR. SECORD: Yes, Ms. Hunter is available to  
3 answer any questions. Thank you.

4 THE CHAIR: Does that complete your direct  
5 then?

6 MR. SECORD: It does.

7 THE CHAIR: I'm assuming that Ms. Louden,  
8 Mr. Williams has already indicated he does not have  
9 questions of Mr. Wagner. I'm assuming none of you have  
10 questions?

11 MR. WAGNER: That is correct, Mr. Chairperson.

12 MS. LOUDEN: This is Sara Louden, and no, we do  
13 not have any questions.

14 THE CHAIR: Okay, thank you. Ms. Senek,  
15 City of Calgary?

16 MS. SENEK: No questions from the City of  
17 Calgary, thank you.

18 THE CHAIR: Mr. Cusano?

19 MR. CUSANO: No questions, sir, thank you.

20 THE CHAIR: Mr. Kruhlak?

21 MR. FITCH: Good morning, Mr. Chair, it's  
22 Gavin Fitch speaking.

23 THE CHAIR: Good morning.

24 MR. FITCH: That's quite all right. I just  
25 have a few questions for Ms. Hunter.

## SCLG TOPIC #2 PANEL

Cross-examined by Mr. Fitch

**1      MR. FITCH CROSS-EXAMINES THE PANEL:**

2      Q.    So to begin, Ms. Hunter, you referred to the -- what we  
3            call the "chronology of consultation" which was  
4            attached to the reply submissions of Alberta  
5            Transportation. And I just want to ask you a few  
6            questions about that document.

7            So if we can, Zoom host, bring up Exhibit 327,  
8            please, PDF page 13. So Ms. Hunter, looking at the  
9            appendix -- I guess it's the fourth page of Appendix C  
10          to the reply submissions of Alberta Transportation, and  
11          I take it from the evidence you gave this morning that  
12          you've had an opportunity to review this document?

13      A.    MS. HUNTER:            Yes.

14      Q.    Okay.

15      A.    MS. HUNTER:            I would say overall, I mean with  
16          the thousands of pages that seem to be going back and  
17          forth, I perused it, picked out points that were  
18          relevant to my speech today.

19      Q.    Right. You just told us that you don't consider emails  
20          to constitute consultation, and that was in reference  
21          to this list of dates where email correspondence  
22          between you and Mr. Hebert are described; correct?

23      A.    MS. HUNTER:            Hm-hm.

24      Q.    You're going to have to say yes.

25      A.    MS. HUNTER:            Yes, yes, that's correct.

## SCLG TOPIC #2 PANEL

Cross-examined by Mr. Fitch

1 Q. Thank you. Do you consider someone offering to meet  
2 "consultation"?

3 A. MS. HUNTER: Yeah, I mean here's what I'm going  
4 to say about my role.

5 We are volunteers, and we're doing the best we  
6 can. And in fact, when it comes to a project that  
7 impacts our whole community, I honestly don't feel I'm  
8 in a position to negotiate some sort of deal.

9 You know, I feel like decisions, I believe, that  
10 there should have been clear consultation and  
11 engagement with the Springbank community hosted by  
12 Alberta Transportation, workshops, discussions, you  
13 know, meetings as appropriate. Alberta Transportation  
14 should have put up signs all over the community and  
15 hosted stuff. There's been nothing ever stopping them  
16 from doing that, and whenever those things happen,  
17 which was an example last year, I shared them out.

18 So you know, I think there's just a general -- and  
19 from my standpoint, as well, a lack of clarity about  
20 roles. It's not my job to -- to market the project to  
21 the community. It's not my job to take on AT's  
22 consultation.

23 And, you know, the Springbank Community  
24 Association, we sent in our questions to the proponent  
25 and received some answers, and then fully a hundred

## SCLG TOPIC #2 PANEL

Cross-examined by Mr. Fitch

1           percent of our time has been trying to keep up with the  
2           regulatory requirements.

3       Q.   Thank you for that.

4           Zoom host, if we can just scroll down the page  
5           just a little bit, that's good, yeah, that's good,  
6           thanks. So I just wanted you to confirm if you will,  
7           Ms. Hunter, that on June 19th, 2019, Mr. Hebert emailed  
8           you, and he offered to meet with you; correct?

9       A.   MS. HUNTER:           I'm going to assume this is  
10          correct. He seems to keep better track of his emails,  
11          although he's a paid employee, and I'm just a  
12          volunteer.

13      Q.   Do you recall taking him up on that offer and meeting  
14          with him?

15      A.   MS. HUNTER:           No, I mean like I say, we're just  
16          treading water here, right? We're just trying to keep  
17          our heads above water on SR1. There's so much  
18          information.

19           And, you know, I'm doing my best as a community  
20          volunteer to keep our community up to date. My  
21          priority is not in -- and I don't even know, honestly,  
22          I don't even know how I could meet on behalf of an  
23          entire community and speak to what we want out of SR1  
24          in an engagement process like you've engaged in with  
25          the Tsut'ina or with other stakeholders like Rocky



## SCLG TOPIC #2 PANEL

Cross-examined by Mr. Fitch

1 View County. I just I don't think that's our role,  
2 that's my role.

3 I view my role throughout this entire process --  
4 it seems like maybe this is one-sided, do you know what  
5 I'm saying? I feel like Mr. Hebert has identified me  
6 as some sort of important person, and I don't have that  
7 same view of my role in dealing with the government.  
8 Do you know what I'm saying?

9 I just think there's been -- there's been a case  
10 of misguided expectations potentially on both sides.  
11 And honestly, our philosophy, and now I'm going to just  
12 speak as my Springbank Community Association role. Our  
13 priority has always been hit those regulatory  
14 deadlines. It has not been engage with Alberta  
15 Transportation because fundamentally, we don't agree  
16 this is the right project.

17 And so for us to spend time one on one with  
18 Matthew Hebert and even the project team to understand,  
19 what's the point?

20 Q. I understand perfectly.

21 A. And frankly -- and frankly, you know, those engagements  
22 I feel like those opportunities, although they -- I  
23 mean he did ask me the one time to meet. And to be  
24 honest, I think you just have to take into account, I'm  
25 not getting paid to do this. I have a million other

## SCLG TOPIC #2 PANEL

Cross-examined by Mr. Fitch

1 things in my life, and those regulatory deadlines have  
2 above all taken priority to everything.

3 So, you know, I would just say I know Matthew's  
4 been -- his intent is good. He's been very much an  
5 improvement over the prior government, in terms of his  
6 willingness to reach out, at least keep me updated, and  
7 I appreciate that. And that's how I sort of looked at  
8 it.

9 But fundamentally having a view that this is wrong  
10 for our community, it creates this situation, and  
11 what's -- how do we even manage that and how do you  
12 find time for that?

13 So I just am saying to you I guess it's complex.  
14 Like I think people look at us and think we're, you  
15 know, we're organized and we're like a corporation.  
16 We're volunteers; we're just trying to do the best we  
17 can. Do you know what I mean?

18 Q. I understand, I understand.

19 So Zoom host, if we can just go down the next  
20 page, you can see page 5 at the top there, and that's  
21 good.

22 So would you confirm for me, Ms. Hunter, that  
23 again, on July 25, 2019, Mr. Hebert offered to meet  
24 with the Springbank Community Association?

25 MR. SECORD: You're on mute, Ms. Hunter.

## SCLG TOPIC #2 PANEL

Cross-examined by Mr. Fitch

1 Ms. Hunter, you're on mute.

2 Q. MR. FITCH: Yeah, we can't hear you.

3 THE CHAIR: Ms. Hunter.

4 A. MS. HUNTER: Sorry, I was trying to get my  
5 screen larger. Yes, but, you know, I think this speaks  
6 to the same issue --

7 Q. Okay.

8 A. MS. HUNTER: -- Mr. Fitch.

9 Q. So same answer to the last question, then?

10 A. MS. HUNTER: Yeah.

11 Q. That's fine. And if we can carry on down at the bottom  
12 of that page, please, Zoom host, a little farther,  
13 there. So under the heading "December 4, 2019," you I  
14 think will confirm for me that on that date, Mr. Hebert  
15 provided to you the draft guiding principles of  
16 directions for land use document?

17 A. MS. HUNTER: Yes.

18 Q. Correct?

19 A. MS. HUNTER: That's correct.

20 Q. If we can scroll down a little farther?

21 A. MS. HUNTER: Yeah, and I appreciated that.  
22 It's nice to stay up to date.

23 Q. Right. And then you also see the note that Mr. Hebert  
24 advised that available to meet with you to discuss the  
25 draft guiding principles and to respond to any other

## SCLG TOPIC #2 PANEL

Cross-examined by Mr. Fitch

1 questions you had about the project; right?

2 A. MS. HUNTER: Okay, I don't -- to be crystal  
3 clear, I'm just trying to stay on top of this all,  
4 right? Like I don't know how much time in the day you  
5 guys think I have to meet and go over all this.

6 Mr. Hebert offered to meet us, not the same as  
7 proposing a time for meeting and saying, "Hey Karin,  
8 I'll be in Calgary." Do you know what I'm saying?

9 Like I just -- our focus has been so much on  
10 meeting these regulatory deadlines which are quite  
11 overwhelming.

12 And again, and, you know, I think the community as  
13 a whole needs to be engaged. And perhaps somewhere  
14 along the way, like I said, that seems to have fallen  
15 to me, and I don't know how that happened. Like I  
16 don't know the outcomes of -- or how we got here, and I  
17 just think it's a misguided expectation that I -- you  
18 know, what do you want me to do about this, right?  
19 Sorry, just give me...

20 Q. I think I understand your position, Ms. Hunter, that's  
21 okay.

22 MR. FITCH: Mr. Chair, I'm just going to  
23 consult with Mr. Hebert for one moment before I go any  
24 further, just one second.

25 THE CHAIR: Okay, thank you. Excuse me, I

## SCLG TOPIC #2 PANEL

Questioned by Ms. Roberts

1 think somebody needs a mute on their -- unless there's  
2 some intent that you're asking the next questions  
3 but -- okay.

4 MR. FITCH: Mr. Chair, it's Gavin Fitch again.  
5 Mr. Chair, those are all our questions for Ms. Hunter.  
6 Ms. Hunter, thank you.

7 A. MS. HUNTER: You're welcome.

8 THE CHAIR: Thank you, Mr. Fitch.

9 Ms. Hunter, I'll just check with staff and Panel  
10 to see if we have any questions on behalf of the NRCB.  
11 Mr. Kennedy?

12 MR. KENNEDY: I have no questions, thank you,  
13 Mr. Chair.

14 THE CHAIR: Ms. Vance?

15 MS. VANCE: I also do not have questions,  
16 thank you.

17 THE CHAIR: Ms. Roberts?

18 MS. ROBERTS: I just have one question; it's  
19 just a little bit of detail.

20 **MS. ROBERTS QUESTIONS THE PANEL:**

21 Q. You had mentioned about historical resources, and  
22 yesterday, Mr. Secord had talked about a condition  
23 about gathering them. I was just wondering if you also  
24 had any thoughts or if your team had any thoughts as to  
25 where and how those might be housed, where they might

## SCLG TOPIC #2 PANEL

Questioned by Ms. Roberts

1 be located and so on?

2 A. MS. HUNTER: Thank you for your question. Is  
3 Jan -- can you speak to that? We do -- our historical  
4 society is -- recommended a few historical projects.  
5 Go ahead, Jan.

6 MR. SECORD: And for the record, this is  
7 Ms. Erisman.

8 A. MS. ERISMAN: Yeah, and I'm part of the  
9 Springbank Historical Society, and there also is a  
10 Bragg Creek Historical Society.

11 I think -- I'm sorry that we don't have any plans  
12 because we were told in all the documentation that  
13 there wasn't any history. And with research, we had  
14 found that there's a lot of history before Alberta  
15 existed that happened in this area.

16 But until the SIA report came out and said that  
17 there were 14 historical structures and 22  
18 archeological sites that we were told by -- in the  
19 reports I'd read, there was just nothing.

20 So -- so no, we hadn't even thought of where we  
21 would put it. And in the situation, should this  
22 project go ahead, I think that would have to be part of  
23 the planning process. And that would be great if we  
24 could protect cowboy history and the Indigenous  
25 history.

## SCLG TOPIC #2 PANEL

Questioned by Ms. Roberts

1 Q. Okay, thank you.

2 A. MS. ERISMAN: Yes.

3 MS. ROBERTS: That's all, Mr. Chairman.

4 THE CHAIR: Thank you, Ms. Roberts.

5 Mr. Ceroici?

6 MR. CEROICI: I don't have any questions, thank  
7 you.

8 THE CHAIR: And Mr. Heaney?

9 MR. HEANEY: I have no questions.

10 THE CHAIR: And I have no questions,  
11 Ms. Hunter. So thank you very much, and thanks for the  
12 time and effort that you've put into this Panel and  
13 previous Panel, as well.

14 Mr. Secord, did you have any redirect?

15 MR. SECORD: I have no redirect, sir, thank  
16 you.

17 THE CHAIR: Okay. It is time for a break for  
18 lunch. Mr. Wagner, you had direct ready, and you'll be  
19 ready after lunch; is that correct?

20 MR. WAGNER: Mr. Chair, I will.

21 THE CHAIR: Okay, so we'll have Mr. Wagner any  
22 lunch, and we'll resume the hearing at 1:15. Thanks  
23 everybody, see you in about an hour.

24 (PROCEEDINGS ADJOURNED AT 12:09 P.M.)

25

## SCLG TOPIC #2 PANEL

Questioned by Ms. Roberts

1 PROCEEDINGS ADJOURNED TO 1:15 P.M.

2

3 Volume 4

4 March 25, 2021

5 P.M. Session

6

7 (PROCEEDINGS RESUMED AT 1:15 P.M.)

8 THE CHAIR: Okay. So we've got a couple of  
9 items left for Topic Area 2, so that's Mr. Wagner's  
10 direct, and then if there's any rebuttal evidence by  
11 Alberta Transportation.

12 So Mr. Wagner, are you online?

13 MR. WAGNER: Mr. Chair, I am. Can you hear me?

14 THE CHAIR: Yes, we can, very clearly. Thank  
15 you. And, Ms. Vespa, Mr. Wagner needs to be sworn in.

16 MR. WAGNER: I believe -- I have my Bible. Can  
17 you see?

18 THE CHAIR: Is your video on by the way,  
19 Mr. Wagner?

20 MR. WAGNER: I thought it was. Just let me  
21 check.

22 THE CHAIR: Mr. Wiebe, I'm not sure -- I see  
23 your name on one of the tiles, but I don't see video.  
24 So if you have video there, it is not right now.

25 MR. WAGNER: We're in the country, so I'm



**S. WAGNER**

Questioned by Ms. Roberts

1           wondering if that's an Internet speed issue because it  
2           does say that my video is on.

3       MR. WIEBE:                    Do you want to just turn it off  
4           and turn it back on again?

5       MR. WAGNER:                  Most certainly. Is that better?  
6           I see my happy face. Well, semi-happy.

7

8       **S. WAGNER (Spokesperson), sworn**

9       THE CHAIR:                    Mr. Wagner, you can leave your  
10          video. It is freezing, but your voice is coming  
11          through fine, so that's fine. As you say, it may be  
12          your Internet connection speed.

13          Now, you had kind of carried over from Topic  
14          Area 1 into 2, and you had requested only five minutes  
15          of each.

16          Did you have just a rough feel for how long you  
17          would like to take today for direct?

18       MR. WAGNER:                  I doubt very much if I'll be more  
19          than five minutes, Mr. Chair.

20       THE CHAIR:                    And that's fine. Just to get an  
21          idea. Thanks a lot. Please proceed.

22       **A. If I could get the document manager to bring up -- and,**  
23          **again, I struggle with this, but Exhibit 327.**

24          This is the right one this time, Mr. Chair. I'll  
25          give further instructions as I go through.

S. WAGNER

Questioned by Ms. Roberts

1           My wife and I are out in Springbank and we've been  
2 here since roughly 1992. My wife grew up in Springbank  
3 and graduated from Springbank High.

4           And as a struggling young couple, we purchased a  
5 mobile home or modular home and moved it to the  
6 heritage lands, which we're now on, in 1992. After a  
7 few successful businesses, we built our current house,  
8 and that's the one that we live in, and that was done  
9 in 2000.

10           I can't overemphasize what is being asked of us.  
11 We are being asked to give up four generations of  
12 community, our retirement home, our dream location, all  
13 for the public good.

14           Yes, we can replace our house -- it's a thing, and  
15 things can be replaced, but it is nearly impossible for  
16 us to replace our location, and definitely impossible  
17 to replace the heritage.

18           We have never had flooding, ever. In fact, we  
19 watched as the seasonal creek in front of our house  
20 swelled to over 100 metres, and that's actually the  
21 background that you see behind me is the 2013 flood.  
22 There is no water in our yard.

23           When we asked a number of local people where to  
24 build our house, and that's -- we obviously got good  
25 advice, don't have any problems.

S. WAGNER

Questioned by Ms. Roberts

1           In the preceding days of the NRCB submission, I  
2           find disclosures that SR1 has a maximum capacity higher  
3           than the design. I continue to be confused by the  
4           maps. Some have our house in the footprint, some  
5           don't. I really wished I had a bigger brain.

6           I have to say we have some huge decisions ahead of  
7           us if the NRCB is to approve this project, decisions I  
8           wish on no one. It would be nice to have the facts  
9           available to be able to make those decisions.

10          If I could bring up page 100 of the document. And  
11          can you -- what's been discussed as the fingers, can  
12          you expand this map to as large as you can with the  
13          fingers showing. Keep expanding. Thank you.

14          I'd like to draw your attention to the SR1. It's  
15          a house location. On there it's a little triangle. We  
16          have two houses on our property. That actually happens  
17          to be the location of our rental.

18          We're the next finger over. So, basically,  
19          there's hundreds of maps, and our current house is not  
20          even on...

21          Thank you very much for your time. I wish to be  
22          open for cross-examination.

23          THE CHAIR:                            Thank you, Mr. Wagner.

24                            Ms. Louden?

25          MS. LOUDEN:                        We do not have any questions for

**S. WAGNER**

Cross-examined by Mr. Fitch

1 Mr. Wagner. Thank you.

2 THE CHAIR: Mr. Secord?

3 MR. SECORD: No questions, sir.

4 THE CHAIR: Ms. Senek?

5 MS. SENEK: No questions. Thank you.

6 THE CHAIR: Mr. Cusano?

7 MR. CUSANO: No questions. Thank you, sir.

8 THE CHAIR: Mr. Fitch or Mr. Kruhlak?

9 MR. FITCH: Good afternoon, Mr. Chairman.

10 It's Mr. Fitch. I wonder if the Board might give me  
11 the indulgence of one or two minutes while I confer  
12 with Mr. Hebert and we can decide whether or not we  
13 have any questions for Mr. Wagner.

14 THE CHAIR: Yes.

15 MR. FITCH: Thank you.

16 Mr. Chairman?

17 THE CHAIR: Yes.

18 MR. FITCH: Okay. I have one question -- I

19 hope just one question for Mr. Wagner.

20 **MR. FITCH CROSS-EXAMINES THE WITNESS:**

21 Q. Mr. Wagner, good afternoon.

22 A. Good afternoon.

23 Q. You've indicated that there are lots of maps and I  
24 certainly wouldn't disagree with you about that. And  
25 you say that some show your residences being inside the

**S. WAGNER**

Cross-examined by Mr. Fitch

1 project area and some show your residences being  
2 outside. Did I basically get that right?

3 **A. Correct.**

4 Q. Would you agree with me that all the maps that you  
5 actually received from AT show that your residences are  
6 outside?

7 **A. Yes.**

8 Q. Okay. Thank you. Those are all my questions.

9 THE CHAIR: Thank you, Mr. Fitch.

10 And I don't imagine you have any redirect,  
11 Mr. Wagner?

12 MR. WAGNER: I don't.

13 THE CHAIR: Okay. Thank you very much,  
14 Mr. Wagner.

15 MR. WAGNER: Thank you, Panel.

16 THE CHAIR: And Panel -- sorry, I skipped  
17 over. I thought I had a note that there were no  
18 questions. But Mr. Kennedy and Ms. Vance?

19 MR. KENNEDY: I have no questions. Thank you,  
20 Mr. Chairman.

21 MS. VANCE: No questions.

22 THE CHAIR: Okay. Panel members?

23 MR. CEROCICI: I have no questions. Thank you.

24 THE CHAIR: Thanks, Mr. Ceroici.

25 Ms. Roberts.

**S. WAGNER**

Questioned by Mr. Heaney

1 MS. ROBERTS: I have no questions either.

2 Thanks.

3 THE CHAIR; And Mr. Heaney?

4 MR. HEANEY: Just one question for Mr. Wagner.

5 **MR. HEANEY QUESTIONS THE WITNESS:**

6 Q. Mr. Wagner, I think yesterday you were talking about  
7 your residence and how -- you know, its elevation above  
8 the high watermark. Would you comment about your  
9 second property or the second residence -- house you  
10 have on the property and its proximity, elevation-wise,  
11 to what you understand to be the high watermark?

12 A. I don't have the exact facts, but I believe it's within  
13 very close range of elevation to the other -- they're  
14 both the same elevation or roughly the same elevation.

15 Q. And in terms of, for the second piece -- or the second  
16 residence on the property, like the lateral distance to  
17 what you think is -- would be the high watermark?

18 A. What do you mean by the lateral distance?

19 Q. Yesterday, I think you said you were about -- as you  
20 understood it, you were within about 35 metres of where  
21 the water would top out in a lateral sense, like from  
22 your front porch walking out.

23 A. Yes, and that was actually -- you know, and I apologize  
24 to Mr. Fitch. That came up -- I found a map that  
25 actually described our existing house and how far the

S. WAGNER

Questioned by Mr. Heaney

1 watermark was to the 200-year flood line.

2 And the questions that I was asking yesterday, by  
3 the way, with regards to our house was not the 200-year  
4 flood line; it was related to going above the 200-year  
5 flood line as they have referred to in previous  
6 conversations over the last number of days.

7 Having said that, we have no information with  
8 regards to the flood line as it pertains to the other  
9 piece of property, which is a rental. And there's a  
10 person there that is a lovely, lovely person that rents  
11 the property from us.

12 Q. Okay. Thank you.

13 THE CHAIR: Okay. Thank you, Mr. Wagner, and  
14 after that question, I mean, you've asked and answered  
15 it, I don't imagine you have any redirect.

16 MR. WAGNER: I do not, Mr. Chair.

17 THE CHAIR: Thank you very much, Mr. Wagner.

18 MR. WAGNER: Thank you.

19 THE CHAIR: And thank you, Dr. Heaney.

20 Mr. Fitch, does Alberta Transportation have any  
21 rebuttal evidence on this topic?

22 MR. FITCH: No, Mr. Chairman, we do not.

23 THE CHAIR: Okay. Thank you.

24 So time to move on to Topic Area 3, then, Project  
25 Design, Safety and Risk.

**S. WAGNER**

Questioned by Mr. Heaney

1           Mr. Fitch, is your panel ready for direct from  
2           Alberta Transportation?

3           **MR. FITCH:**                    I believe they are, Mr. Chairman.

4           So to provide a bit of a roadmap, the members of  
5           the Topic Session Number 3 witness panel for Alberta  
6           Transportation are Mr. Hebert, Mr. Wood, Mr. Speller,  
7           Mr. Brescia, Mr. Svenson, Mr. Menninger, and  
8           Ms. Carignan, all of whom have previously testified and  
9           been sworn, and I'm just going to ask each of those  
10          individuals, in turn, to confirm that they consider  
11          themselves still under oath. And I'll start with you,  
12          Mr. Hebert.

13          **A. MR. HEBERT:**            **Mr. Fitch, I am still under oath.**

14          **MR. FITCH:**                    Thank you. Mr. Wood?

15          **A. MR. WOOD:**                **Yes, I am still under oath.**

16          **MR. FITCH:**                    Mr. Speller?

17          **A. MR. SPELLER:**            **Yes, I am still under oath.**

18          **MR. FITCH:**                    Mr. Brescia?

19          **A. MR. BRESCIA:**            **Yes, I'm still under oath.**

20          **MR. FITCH:**                    Mr. Svenson?

21          **A. MR. SVENSON:**            **Yes, I'm still under oath.**

22          **MR. FITCH:**                    Mr. Menninger?

23          **A. MR. MENNINGER:**          **Yes, I am still under oath.**

24          **MR. FITCH:**                    Ms. Carignan?

25          **A. MS. CARIGNAN:**           **Yes, I'm still under oath.**



## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1 MR. FITCH: Thank you. And now, Mr. Chair, we  
2 have three additional witnesses on this witness panel  
3 who are joining us for the first time. They are  
4 Mr. Dan Back, Mr. Dave Luzi, and Mr. Dan Yoshisaka.

5 And I'm going to begin with you, Mr. Back. Are  
6 you with us?

7 A. MR. BACK: Yes, I am.

8 MR. FITCH: Thank you.

9 Q. Mr. Back, your CV has been filed as part of Exhibit --

10 COURT REPORTER: Excuse me, excuse me. Would you  
11 like the witnesses sworn before you begin?

12 MR. FITCH: Oh, yes. Yes, please.

13

14 M. HEBERT, M. SVENSON, W. SPELLER, D. BRESCIA, M. WOOD,  
15 Y. CARIGNAN, D. BACK, D. LUZI, D. YOSHISAKA (For Alberta  
16 Transportation), previously sworn/sworn/affirmed

17 MR. FITCH EXAMINES THE PANEL:

18 Q. So back to you, Mr. Back -- no pun intended -- your CV  
19 has been filed as part of Exhibit 336 at PDF page 7.  
20 Can you confirm, sir, that it is accurate, to the best  
21 of your knowledge.

22 A. MR. BACK: Yes, sir, that is accurate.

23 Q. And I understand you work at Stantec as a principal and  
24 senior geotechnical engineer?

25 A. MR. BACK: That is correct.

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1 Q. Can you just briefly provide the Board with a summary  
2 of your education and experience?

3 A. MR. BACK: Yes, of course. I completed a  
4 bachelor of science in civil engineering from the  
5 University of Kentucky in 1979 and a master of  
6 engineering with concentration in geotechnical  
7 engineering at Cornell University in 1986.

8 I've worked as a civil and geotechnical engineer  
9 for the past 42 years and have experience in analysis  
10 and design of a large -- a variety of large civil  
11 engineering projects.

12 I have more than 30 years of significant  
13 involvement with dams, hydraulic and waterfront  
14 structure projects, specifically including more than  
15 50 dams.

16 Q. Thank you, sir. And what was your role in this  
17 application?

18 A. MR. BACK: Well, I've worked with the dam and  
19 diversions engineering design team providing  
20 geotechnical and design analysis for each of the SR1  
21 project elements. I prepared relevant geotechnical  
22 portions of the design analysis reports and, as needed,  
23 I've responded to technical questions on geotechnical  
24 issues with the EIA-related submissions.

25 Q. Thank you, Mr. Back.

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1           Mr. Luzi, turning to you now. Your CV has been  
2           filed as part of Exhibit 336 at PDF page 25. Can you  
3           confirm, sir, that it is accurate.

4           **A. MR. LUZI:                    Yes, it is.**

5           Q. And I understand you work at Stantec as well and that  
6           you are a principal and the national technical lead for  
7           hydrology, and that you are a senior hydrologist and  
8           geomorphologist; is that correct?

9           **A. MR. LUZI:                    That is correct.**

10          Q. And what is your education and experience, briefly,  
11          sir?

12          **A. MR. LUZI:                    I did a bachelor's in physical**  
13          **geography at the University of Calgary and then have a**  
14          **masters and PHD at University of British Columbia. And**  
15          **I've been doing fluvial geomorphology and hydrology for**  
16          **the last 20 years in both professional practice as well**  
17          **as academia.**

18          Q. Thank you. What was your role in this application?

19          **A. MR. LUZI:                    I was the discipline lead for**  
20          **hydrology.**

21          Q. Thank you. Mr. Yoshisaka, your CV has been filed as  
22          part of Exhibit 336, at PDF page 12. Can you please  
23          confirm that it is accurate.

24          **A. MR. YOSHISAKA:            Yes, I can. That's correct.**

25          Q. And I understand you work at Stantec as a senior

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1 principal and geoenvironmental engineer; is that right?

2 A. MR. YOSHISAKA: That's correct.

3 Q. Okay. Can you give us a brief summary of your  
4 education and experience, please.

5 A. MR. YOSHISAKA: Sure. I hold a bachelor of  
6 science in civil engineering as well as a master of  
7 science in environmental engineering.

8 I have over 20 years of professional experience in  
9 completing hydrogeologic assessments and studies across  
10 Canada and beyond. I have experience in environmental  
11 impact assessments for a wide variety of projects, and  
12 I've held roles both as a regulator, reviewing EIAs and  
13 associated applications under EPEA and the *Water Act*  
14 and as a consultant for both proponents and concerned  
15 third parties.

16 I've been qualified as an expert witness for both  
17 quasi-judicial, tribunals, and sole proceedings  
18 representing both the Crown in Right of Alberta and  
19 various proponents for more than 17 years.

20 Q. Thank you, sir. And what was your role in the SR1  
21 application?

22 A. MR. YOSHISAKA: I have been the hydrogeology lead  
23 for the SR1 project since its inception in 2015. I  
24 have led a team of professionals who contributed to the  
25 hydrogeology components of the EIA, and subsequent SER

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1 responses. This team consisted of professional  
2 engineers and geologists with more than 100 years of  
3 combined experience in groundwater-related studies  
4 across Canada.

5 Q. MR. FITCH: Thank you, Mr. Yoshisaka.

6 So now, Mr. Hebert, I'm going to turn to you. I  
7 understand you have some opening remarks, and then  
8 Mr. Menninger will supplement those remarks. Please  
9 proceed.

10 A. MR. HEBERT: Thank you, Mr. Fitch. Good  
11 afternoon, Mr. Chairman, members of the panel, NRCB  
12 counsel and staff, members of participating parties  
13 that are on the Zoom call and members of the public  
14 joining us today on YouTube.

15 Mr. Chairman, Alberta Transportation, this  
16 morning, listened carefully to the Stoney Nakoda elders  
17 and representatives.

18 Transportation takes their comments seriously and  
19 will be following up directly with Stoney  
20 representatives regarding matters they've raised in  
21 these proceedings.

22 I would also like to reaffirm for the Board the  
23 commitments we made regarding directly impacted  
24 landowners, adjacent landowners, and members of the  
25 Springbank community that we made in previous days.

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1           As it pertains to Topic 3.

2           Mr. Chairman, I want to begin by assuring the  
3 Board that the safety of SR1 is a number one priority  
4 for Alberta Transportation. This principle has  
5 dictated the design and formulation of the project from  
6 the start.

7           Not only did the flood of 2013 cause enormous  
8 economic losses, we must never forget that five deaths  
9 have been attributed to the 2013 flood, as well as a  
10 variety of public health concerns.

11           SR1 will provide a considerable reduction in flood  
12 risk, and an improvement in public safety to downstream  
13 communities.

14           SR1 is designed in accordance with the provincial  
15 standards and federal guidelines for dams. These  
16 standards are part of the regulatory requirements for  
17 the design of dams in Alberta, and they specify the  
18 design requirements and factors of safety that need to  
19 be met for facilities of a given consequence  
20 classification.

21           As an extreme consequence structure, the SR1 dam  
22 is designed to the highest standards set forth in the  
23 criteria.

24           While the extreme consequence classification of  
25 SR1 is notable, it is not unique. Currently, there are

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1           87 extreme consequence dams in Alberta. These include  
2 facilities operated by Alberta Environment and Parks,  
3 like the Dickson Dam, the Oldman Dam and the Travers  
4 Dam.

5           There are also several dams with extreme  
6 consequence ratings located upstream of Calgary on the  
7 Bow River including the Bearspaw Dam, the Ghost Dam,  
8 the Lake Minnewanka Dam, and the Canyon Dam at  
9 Kananaskis Lakes.

10           Finally, the Glenmore Dam on the Elbow River in  
11 Calgary has an extreme consequence classification.

12 Q. Contrary to what has been implied by some of the  
13 project's opponents, there is nothing unusual or unique  
14 about having such a facility located in proximity to a  
15 large population centre like the City of Calgary.

16           That said, Transportation acknowledges and accepts  
17 that this means that SR1 must be designed to the  
18 highest standards, must be operated safely, and must  
19 have a robust emergency plan in place in the highly  
20 unlikely event that a problem does occur at the  
21 project.

22           Transportation is confident SR1 meets or exceeds  
23 all these requirements.

24           I'm now going to ask Mr. John Menninger of  
25 Stantec, who is the designer of record for the project,

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1 to elaborate on how the design of SR1 is safe in both  
2 its designed and plan operation.

3 Mr. Menninger.

4 **A. MR. MENNINGER:** Thank you, Matt.

5 Mr. Chairman, as Mr. Hebert stated, safety of the  
6 SR1 facility is of the utmost priority to Alberta  
7 Transportation and the design teams.

8 The design has undergone, and will continue to  
9 undergo, a rigorous quality control process. The  
10 design has been reviewed by an experienced independent  
11 third-party review Board and will be reviewed by the  
12 Alberta dam safety regulator.

13 Failure modes of the individual components and the  
14 complete system have been considered in the design, and  
15 features and mechanisms have been implemented to  
16 mitigate potential risks.

17 During design of a dam, we consider potential  
18 failures such as dam overtopping or erosion of the  
19 embankment and then design to prevent these failures.  
20 For example, the emergency spillway is sized to pass  
21 the full probable maximum flood event safely. That's  
22 without consideration of the ability to close the  
23 diversion inlet gates. This provides a secondary level  
24 of protection against the dam from overtopping in the  
25 event that the diversion inlet gates do not close.



1 Further examples include the addition of resilient  
2 and redundant systems for mechanical and operating  
3 components of the project such as backup power to  
4 ensure that gates can be operated even during  
5 situations where a storm has affected the electrical  
6 grid; remote, local, and manual control options for the  
7 gate systems to be operated from the control building  
8 or the structure, and manually should the computer  
9 systems fail.

10 In addition, multiple layers of debris  
11 management -- multiple layers of debris management  
12 begin with the debris deflection barrier that excludes  
13 large debris from being diverted into the reservoir.

14 Further, the diversion structure has been designed  
15 to pass debris without hindering operations.

16 And, finally, the trash racks located on the  
17 low-level outlet provide an additional layer of  
18 protection at the dam.

19 During construction, quality assurance and quality  
20 control programs will be in place to monitor compliance  
21 with the design.

22 Instrumentation will monitor the performance of  
23 the dam earthworks and foundation. Monitoring of  
24 instrumentation will continue after construction and  
25 through the life of the facility.

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1           In operations, maintenance and surveillance  
2 program will direct routine operations for the  
3 structure and direct regular maintenance requirements.

4           Under the regulatory requirements in force in  
5 Alberta, the owners of dams need to undertake dam  
6 safety reviews at regular intervals to maintain their  
7 licence to operate.

8           As an extreme consequence structure, the dam  
9 safety review for SR1 will occur, at minimum, once  
10 every five years.

11          The dam safety reviews include a review of the  
12 hydrologic estimates made for the inflow design flood.

13          The province of Alberta has a robust emergency  
14 management program for all dams within the province.

15          As the operator of SR1, Alberta Environment and  
16 Parks will prepare an emergency preparedness plan, an  
17 emergency response plan, and a flood action plan that  
18 meet the regulatory requirements for extreme  
19 consequence facilities as stipulated in the Alberta dam  
20 and canal safety directive and the government of  
21 Alberta's operational plan for dam safety.

22          The preparation of these plans will involve  
23 consultation and coordination with downstream  
24 stakeholders in the same manner that is required at all  
25 their facilities.

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1           The emergency management plan, emergency response  
2 plan, and flood management plan will be prepared by AEP  
3 following regulatory approval of SR1 when construction  
4 procurement is complete and the project is closer to  
5 commissioning. This is because the plans require  
6 information on equipment models, construction records,  
7 and other details of the facility that are not  
8 finalized at this time.

9           As you know, Mr. Chairman, the SR1 Concerned  
10 Landowners Group retained Austin Engineering to review  
11 the design and planned operation of SR1, to identify  
12 risks and recommend improvements in the dam safety  
13 aspects of the project.

14           Stantec carefully reviewed the Austin Engineering  
15 report and provided a detailed response in a technical  
16 memorandum, which was included as part of Alberta  
17 Transportation's reply submission.

18           Our technical memorandum is in Exhibit 327 at  
19 Appendix E.

20           To summarize our response briefly, we disagree  
21 with the suggestion that the design of SR1 fails to  
22 meet any Canadian Dam Association safety guidelines.

23           With respect to the recommendations made by  
24 Austin Engineering which included that no changes to  
25 the design of the project are necessary, however, we

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Examined by Mr. Fitch

1 acknowledge the efforts that Austin Engineering  
2 obviously put into their review, and for that reason,  
3 on March 19th, 2021, Alberta Transportation provided  
4 their report, together with Stantec's response, to the  
5 AEP dam safety review team that is reviewing the SR1  
6 design for their information and consideration.

7 Thank you.

8 MR. FITCH: Thank you, Mr. Menninger.

9 Mr. Chairman, that completes the opening statement of  
10 Alberta Transportation on Topic Session 3. The  
11 witnesses are now available for cross-examination.

12 THE CHAIR: Thank you. Now, I'm assuming that  
13 Calgary River Community Action Group, City of Calgary  
14 don't have any cross at this point; is that correct?

15 MR. CUSANO: It's Lou Cusano, sir. Yes, that's  
16 correct.

17 THE CHAIR: Ms. Senek?

18 MS. MUNKITTRICK: Mr. Chair, this is  
19 Sara Munkittrick speaking. I believe Ms. Senek has  
20 just stepped away. I do not believe we have any  
21 questions either.

22 THE CHAIR: Okay, thank you. Ms. Louden with  
23 Stoney Nakoda?

24 MS. LOUDEN: No, Mr. Chair, we do not have any  
25 questions.

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Cross-examined by Mr. Secord

1 THE CHAIR: Thank you.

2 Mr. Secord.

3 **MR. SECORD CROSS-EXAMINES THE PANEL:**

4 Q. For those of you who are new on the panel, my name is  
5 Richard Secord, and I am counsel for the SCLG Group.

6 Most of my questions I expect to start off with  
7 will be perhaps for Mr. Menninger. But Mr. Hebert, I  
8 think you're the quarterback, so feel free to direct  
9 the questions as you see fit.

10 THE CHAIR: Mr. Secord, just before we  
11 continue, Ms. Vespa, are you okay with Mr. Secord's  
12 voice, the volume? You're good, you can hear him?  
13 Okay.

14 Mr. Secord, I recall on my table, it shows it was  
15 assumed the amount of time you have designated to Topic  
16 Number 3, which was all approved. So I mean that will  
17 take us for sure through today and then into tomorrow.  
18 But proceed, and then we'll just break for the  
19 afternoon at some point just to give people time to  
20 stretch, have a washroom break. But I'll try to pick a  
21 time that seems to work with the testimony and  
22 questions.

23 MR. SECORD: Thank you, sir.

24 THE CHAIR: Thank you.

25 Q. MR. SECORD: What is a diversion inlet rating

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Cross-examined by Mr. Secord

1 curve?

2 A. MR. MENNINGER: Sure. I can take that. So this  
3 is John Menninger.

4 So a rating curve is a relationship between  
5 elevation of water and the flow and a discharge through  
6 a structure. So when you referenced the diversion  
7 inlet rating curve, simply speaking, that means the  
8 water upstream of the diversion inlet correlates to a  
9 specific flow rate that's going through the diversion  
10 inlet structure. So at elevation 1215.8, 600 cubic  
11 metres per second would go into the diversion channel.

12 Q. Document manager, perhaps we could pull up Exhibit 159,  
13 PDF page 100, Figure 19. And perhaps you could get  
14 Figure 19 in the centre there sort of enlarged so we  
15 can read the small -- the fine print, thank you.

16 Now, Mr. Menninger, I believe you were  
17 involved -- you've been involved since 2017; correct?

18 A. MR. MENNINGER: Since 2014.

19 Q. Right. And you would, I'm sure, be familiar with the  
20 diversion inlet rating curve that had -- that was filed  
21 in March of 2017 in the preliminary or the draft EIA;  
22 correct?

23 A. MR. MENNINGER: Yes.

24 Q. Between the 2017 draft and final preliminary designs,  
25 an access bridge has been added over the diversion

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Cross-examined by Mr. Secord

1 inlet with a bottom elevation of 1215.5 metres;  
2 correct?

3 **A. MR. MENNINGER: It was in the 2017 design as well,**  
4 **Mr. Secord.**

5 **Q. Okay. And the addition of the access bridge to the**  
6 **design, did that not result in a decrease in the**  
7 **discharge shown in the rating curve at the water**  
8 **surface elevation of 1216 metres?**

9 **A. MR. MENNINGER: It did -- I do not believe the**  
10 **rating curve actually has changed between the two**  
11 **timelines.**

12 **Q. Has the impact of the bridge been accounted for in the**  
13 **analysis?**

14 **A. MR. MENNINGER: Yes.**

15 **Q. And what was the anticipated reduction in intake flows**  
16 **as a result of adding the access bridge to the design?**

17 **A. MR. MENNINGER: So, as I stated previously, the**  
18 **bridge has been an integral part of the design from the**  
19 **beginning.**

20 **It purposely is set at the given elevation. The**  
21 **curvature of the upstream support structure for the**  
22 **bridge is intended. It has a rounded edge to the front**  
23 **side of it.**

24 **But in general, the purpose of the bridge is**  
25 **twofold: Number one, it does provide access across the**

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Cross-examined by Mr. Secord

1 structure for vehicles, trucks, cranes, other elements  
2 of maintenance vehicles. It provides access across.

3 But the second piece that it does is that the  
4 upstream support for that bridge member is what's known  
5 as a "breast wall." What that does is that breast wall  
6 helps to limit flows at higher elevations from entering  
7 into a structure. It can change something going from a  
8 weir flow to orifice flow, which actually would  
9 restrict some flow.

10 So it's intentionally set at an elevation where it  
11 doesn't affect our ability to divert for the design  
12 flood but at higher elevations would reduce the risk of  
13 additional flows entering the structure when elevations  
14 increase.

15 Q. What do you mean by a "weir flow"?

16 A. MR. MENNINGER: Sure, so a weir, so if you think  
17 of it as a -- water flows over top of it, a lot of  
18 times they call them sharp-crested or broad-crested  
19 weirs. It's a flat or sharp angle that the water flows  
20 over. The length -- the shape of that weir and its  
21 length dictates how much flow would go over it for a  
22 given elevation.

23 An orifice, on the other hand, is a hole that  
24 water has to flow through. So it has to go  
25 through -- so instead of just having that surface



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Cross-examined by Mr. Secord

1 friction on the bottom, has it all around the sides,  
2 and it restricts the flow and causes flow to slow down,  
3 in simplest terms.

4 Q. And in this case, what type of flow do we have?

5 A. MR. MENNINGER: Primarily -- primarily it  
6 functions as weir flow for the majority of it, but as I  
7 said, if you were ever to get water surface elevations  
8 that would exceed the design -- so for our intents and  
9 purposes, that 1215.8 is intended to be the 600.

10 I will note, as you mentioned, the bottom of the  
11 wall is 1215.5. What you will see, though, is that  
12 this curve is not set immediately at the wall. It is  
13 upstream before you have the influence of drawdown into  
14 the structure and through it.

15 And so when we tested this in numerical models and  
16 in physical models, what we observed is at the breast  
17 wall and at 600 cubic metres per second, the water  
18 surface elevation doesn't touch the wall, so --

19 Q. Sorry, and in relation to Figure 19 which we have up on  
20 the screen --

21 A. MR. MENNINGER: Yes.

22 Q. -- can you explain to the Panel how the curve works and  
23 exactly what you're referring to when you gave that  
24 answer a moment ago in relation to the curve?

25 A. MR. MENNINGER: Sure. So this curve, as I

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Cross-examined by Mr. Secord

1 mentioned, on the left-hand side is water surface  
2 elevation. That's the water surface elevation upstream  
3 of the diversion inlet, so that's what controls flow  
4 into the channel. That is measured at a distance far  
5 enough away from the structure that it doesn't have  
6 that drawdown effect.

7 So, in this case, it's about 20 metres or so  
8 upstream of the structure is what that elevation is in  
9 reference to. And then on the X axis, on the bottom,  
10 is the discharge through that structure.

11 And so, in this case, if you come across and you  
12 would follow -- if you picked an elevation, we can pick  
13 1213, I would select the 1213 number, and then I would  
14 go across that grid until I intersected the blue line.  
15 At that point, that would tell me what number I would  
16 have to read off of the bottom axis.

17 So in this case, at 1213, you would have 120 cubic  
18 metres per second going into the diversion channel.

19 Q. And the bridge, the access bridge, has an elevation, it  
20 has a water surface elevation of 1216 metres?

21 A. MR. MENNINGER: I believe the bottom of the bridge  
22 is at 1215.5, Mr. Secord.

23 Q. So if we go to the bottom of the bridge at 1215.5, that  
24 would mean that the discharge rate would be something  
25 in the order of 500 --

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Cross-examined by Mr. Secord

1 A. MR. MENNINGER: Yeah, 550 or so.

2 Q. 550 cubic metres per second?

3 A. MR. MENNINGER: Yeah, but as I said, this is not  
4 measured at the bridge. It's measured -- the reference  
5 point is slightly upstream of the bridge, and there's a  
6 drawdown effect that occurs between the two structures,  
7 if that helps.

8 Q. And the bridge is actually going over the inlet gates  
9 to the reservoir; correct?

10 A. MR. MENNINGER: That's correct. Well, I'm sorry,  
11 let me rephrase that. The bridge goes in front the  
12 gates, not overtop of the gates, in front of.

13 Q. Does the bridge, then, operate as a barrier to flow  
14 above 1215.5, a surface elevation of 1215.5, does it  
15 operate as a barrier to water flow --

16 A. MR. MENNINGER: Yes, intentionally so. But as I  
17 said, that's for when the water is at 1215.5 at the  
18 bridge. That's not what this curve is referencing.

19 This curve is referencing a point upstream of the  
20 bridge that's away from the influence of the drawdown  
21 down and through the structure.

22 So the hydraulics here is important to note that.  
23 And so it is not restricting flow at our design flood  
24 elevation of 1215.8. As I said, we observe that  
25 drawdown effect in both our hydraulic models, both the

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Cross-examined by Mr. Secord

1 numerical computer models and the physical model that  
2 was produced for this project and demonstrated that we  
3 could pass the correct amount of flow through the  
4 structure at the designed elevations.

5 Q. And you said that the water surface elevation or the  
6 WSE, that is mentioned measured at a .20 metres  
7 upstream of the bridge?

8 A. MR. MENNINGER: It's I think roughly, subject to  
9 check, but yes, it's upstream of the bridge, not right  
10 at the face of the wall. That's correct.

11 Q. And how is it measured? In other words, how is the  
12 measurement taken and communicated to the eventual  
13 operator of the facility?

14 A. MR. MENNINGER: Sure. So we'll have -- we're  
15 going to have multiple locations for water surface  
16 measurement for the project. I am telling you that  
17 this hydraulic rating curve is based off of that point  
18 10 to 20 -- upstream of the structure.

19 When we produce the required instrumentation and  
20 controls for the gate systems, we will -- we have  
21 locations proposed for instrumentation. We'll have  
22 several that are located and mounted to the debris  
23 barrier in and around that location. That can be above  
24 the water level using ultrasonic measurements to shoot  
25 down towards the water surface elevations to capture

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Cross-examined by Mr. Secord

1           those locations, and we'll utilize our tools,  
2           hydraulic-modelling tools, to relate that elevation to  
3           the rating curve and then allow for the operators to  
4           make decisions with regards to operations.

5       Q.   And you mentioned 10 to 20. Is it 10 metres before the  
6           access bridge or 20 metres? Maybe I should just ask  
7           you, is there somewhere in the application materials  
8           which would give us -- which would pinpoint the exact  
9           distance? And, rather than taking time, would you be  
10          able to undertake to advise me what the exact distance  
11          is?

12       A.   MR. MENNINGER:           I can advise you, Mr. Secord, that  
13           it doesn't matter. The elevation difference, 10 and 20  
14           metres upstream of the structure, it will be the same.  
15           The water surface profile in that location has a slope  
16           that would be imperceptible, and so we could call it 20  
17           metres and I think that would be fine.

18       Q.   Does that slope change -- in the 20 metres from the  
19           point where it's measured to the point where it hits  
20           the access bridge, does that slope change?

21       A.   MR. MENNINGER:           Yes. Like I said, it's a drawdown  
22           effect that was observed.

23       Q.   And what would be that drawdown effect? Is there a  
24           graph that would show the drawdown effect in that 10 to  
25          20 metres?

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1       **A. MR. MENNINGER:**           Yes. I could point you to  
2       Exhibit -- make sure that I get it correct for you.  
3       Exhibit 174, which is Appendix C of the Preliminary  
4       Design Report, the hydraulics section, and it is page  
5       70 of the PDF is a good illustration of the effect.

6       **Q.** All right. And in relation to the diversion inlet  
7       rating curve that we see here, were the -- the water  
8       surface elevation at the measuring point 10 to 20  
9       metres upstream, say it was at 1217 metres, that would  
10      provide a discharge rate at that point of something in  
11      the order of 800 and let's say 80 cubic metres per  
12      second.

13                Would that amount of water be accommodated in that  
14      drawdown to be able to go entirely into the reservoir  
15      or would you see some of that water going into the  
16      spillway at an elevation of 1217 metres?

17      **A. MR. MENNINGER:**           Sure. So I will say -- so number  
18      one, the structure is not intended -- the design  
19      operations parameters for this project are not to allow  
20      the flows to exceed 600 cubic metres per second. As  
21      such, we would close the gates to prevent flow from  
22      exceeding that number of 600. So, number one, we would  
23      not intend to do that.

24                The reason this diversion inlet rating curve  
25      extends to that level was so that we could analyze the

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1 potential effects of a malfunction of the gates and a  
2 failure for them to close. In this scenario, that  
3 would represent a -- that 1217 is slightly greater than  
4 what the probable maximum flood would produce at the  
5 structure. So in that case, that amount of flow could  
6 flow into the channel.

7 What we did analyze within the Preliminary Design  
8 Report was, in that scenario, we confirmed that the  
9 discharge channel could contain those flows, that none  
10 of the embankments or sidewalls of the channel would be  
11 overtopped during that extreme scenario. And again, as  
12 I said, not a planned scenario; that would be a  
13 malfunction of the system, and we do not intend to push  
14 more than 600 down through it. But if it were to enter  
15 the channel, it would flow to the reservoir up until  
16 the point that the reservoir was completely full up to  
17 the emergency spillway, and then flows would discharge  
18 through the emergency spillway. And we've demonstrated  
19 that within our application.

20 Q. So do I understand, then, that the water surface  
21 elevation of 1217 metres that is shown in Figure 19,  
22 that essentially represents the flood of record, the  
23 June 2013 flood?

24 A. MR. MENNINGER: No, no. What I'm telling you,  
25 this is the flow only through the diversion inlet

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1 structure. This is not all the flows that are in the  
2 river.

3 Under the scenario of the flood of record, the  
4 June 2013, where we estimate that the discharge in the  
5 Elbow River was 1240 cubic metres per second. Our  
6 design approach would be to pass 640 cubic metres  
7 through the service spillway, which is in the river,  
8 and then 600 into the channel.

9 So that would occur -- so our goal, then, would be  
10 to use the gates of the service spillway to produce a  
11 water surface elevation of 1215.8 which represents  
12 600 cubic metres per second going through the diversion  
13 inlet.

14 Q. And what happens to the water, then, that is above the  
15 1215.8?

16 A. MR. MENNINGER: There is no water. We're not  
17 raising the water above 1215.8; we're setting it.

18 The elegant solution about SR1 and the proposed  
19 operation scheme is as water flows down through the  
20 Elbow River, we're measuring it. When it gets to an  
21 elevation that we know represents 160 cubic metres per  
22 second at the service spillway, we open up -- or  
23 slightly prior -- we open up those gates on the  
24 diversion inlet. They are fully open. We then use the  
25 gates in the river to raise the water surface elevation



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1 slowly to control the flows into the channel. This  
2 curve basically tells us at any given elevation in the  
3 river, that's how much flow is going into the channel.  
4 And so when we want to hit a constant diversion rate of  
5 600 cubic metres per second, what we have to do is just  
6 operate those gates in the river to keep the water  
7 level at 1215.8. So if it starts to get above 1215.8,  
8 we lower the gates. If it gets below 1215.8, we raise  
9 the gates. In simple terms, we use the gates in the  
10 river to control the water level.

11 Q. But the bridge bottom is at an elevation of 1215.5, so  
12 how much freeboard is achieved at the design flow?

13 A. MR. MENNINGER: Well, as I said, the bridge has no  
14 effect on the flow during the design flow; the water is  
15 underneath it. And, as the figure I referenced and  
16 gave you reference to, shows, and, as the physical  
17 modelling demonstrates, that was produced so the water  
18 doesn't hit the structure and it doesn't affect it.

19 In terms of freeboard, when we reference  
20 freeboard, what we're worried about is where that water  
21 will go and impact -- it doesn't impact the bridge.  
22 The bridge has been designed for impact loadings from  
23 large trees and vehicles. The bridge is not affected  
24 by the structures; it's designed to withstand impacts  
25 from flows much higher.

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1           What we're worried about would be water going  
2           overtop of the height of all walls. And so those walls  
3           have freeboard of a metre and a half to 2 metres.  
4           They're up to 1219, something -- or up to 1219. And so  
5           those are the pieces that we are focused on in terms of  
6           freeboard.

7           Q. And where is the individual or individuals who would be  
8           operating the gates? Where will they be located?

9           A. MR. MENNINGER:           Sure. So they have a couple of  
10           options. Number one, we have a control building that's  
11           located in a parking lot that's adjacent to the service  
12           spillway and the diversion structure.

13                   Document manager, it might be helpful -- I guess  
14           it's up to the questioner here. I can describe it.  
15           There's a parking lot adjacent to the two gates.

16           Q. Do you have a reference?

17           A. MR. MENNINGER:           Sure. One of the drawings from  
18           the preliminary design report would work well. Let me  
19           find the number for you.

20                   So that would be Exhibit 159, PDF 283.

21                   All right. So what you see on this drawing is on  
22           the bottom of the drawing is the service spillway and  
23           the Elbow River. The water is flowing left to right.  
24           At the top of the page is the diversion channel.

25           Q. Just before you go, it's a little overwhelming here,

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1 all of this information. I do see the parking lot.

2 A. MR. MENNINGER: Yes.

3 Q. There's a parking lot that appears to be north of what  
4 they call the service spillway?

5 A. MR. MENNINGER: That's correct.

6 Q. Can you maybe just -- so we've got the debris  
7 deflection barrier there on the bottom left?

8 A. MR. MENNINGER: That's correct.

9 Q. And just help me out. The gates would be shown just, I  
10 guess above the debris deflection barrier?

11 A. MR. MENNINGER: Yes. So you have the debris --

12 Q. And let's just tie in the access bridge.

13 A. MR. MENNINGER: Okay. So that hatched area, that  
14 kind of grayish area that goes over the top of the  
15 white there is the access bridge, and the gates are  
16 just downstream.

17 Q. So right where we see the words 10 plus 100, just below  
18 diversion inlet?

19 A. MR. MENNINGER: Yeah. It's more of where that  
20 plus sign is, if you will. That's basically where the  
21 gates are. You can sort of make them out there.

22 Q. But the bridge -- is that the bridge that you're  
23 referring to?

24 A. MR. MENNINGER: No. The bridge is down -- the  
25 bridge is below that. It's that hatched area where you

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1 can see the two kind of gate symbols on either side of  
2 it.

3 Q. Right. I've got you. So basically just to the -- it  
4 would be to the west of the parking lot?

5 A. MR. MENNINGER: Yes. It connects the two sides.  
6 That's right. It connects the parking lots on either  
7 side. So you can see the control building is shown  
8 there in the parking lot.

9 Q. If we could back to Figure 19, Document host. We were  
10 just at that page. So you've got your people in the  
11 parking lot operating the height of the gates.

12 Can you tell me, if they mismanaged the operation  
13 of those gates, would -- could the water surface  
14 profile actually hit the access bridge?

15 A. MR. MENNINGER: Yes, intentionally so. The access  
16 bridge is supposed to restrict flows if they get  
17 higher.

18 Q. And then what happens with that water once it hits  
19 the -- maybe we'll go back -- can we go back to the  
20 other diagram?

21 A. MR. MENNINGER: Absolutely. So when you restrict  
22 flow into the channel --

23 Q. Just one second. PDF page 283?

24 A. MR. MENNINGER: So it's a balance game here,  
25 right, so when you restrict flow into the channel, the

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1 flow that doesn't get into the channel stays in the  
2 river and so it goes downstream.

3 So in this case, every bit of flow that we  
4 restrict just continues through the service spillway  
5 gates and downstream, would be the simplest  
6 explanation.

7 Q. And in relation to the service spillway area, I take it  
8 all of that water then runs -- eventually does it  
9 overland to the Elbow?

10 A. MR. MENNINGER: The service spillway is within the  
11 Elbow River. The Elbow River flows through it.

12 Q. When would the design spillway -- when would that ever  
13 be engaged?

14 A. MR. MENNINGER: I'm not sure what you're referring  
15 to as "the design spillway."

16 Q. So is the service spillway the entire spillway?

17 A. MR. MENNINGER: Sure. So the portion of the  
18 structure that's within the Elbow River floodplain is a  
19 combination. We refer to it as the service spillway  
20 which is the set of gates that are in the river that I  
21 just mentioned that go up and down and control the  
22 water level within the river itself.

23 Adjacent to the service spillway is a structure  
24 that's called the auxiliary spillway. That structure  
25 is at a much higher elevation. So the service spillway

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1 is at 1210. The auxiliary spillway does not activate  
2 until 1216.5. I know that there's a lot of numbers  
3 here, but 6 and a half metres above the service  
4 spillway and above what our design operating levels  
5 are.

6 So if water continues to get higher than we intend  
7 to operate the structure, it would flow over the  
8 auxiliary spillway to provide a secondary flow path for  
9 water within the river and to keep the water surface  
10 elevations upstream controlled.

11 Adjacent to pass that is the floodplain berm,  
12 which is positioned at a high enough point so it will  
13 not overtop, and so the service spillway and the  
14 auxiliary spillway control the flows within the river.  
15 Everything that goes over those two goes downstream and  
16 stays within the Elbow River channel and floodplain  
17 area.

18 Q. So, in this case, if water hit the access bridge, it  
19 would simply be falling back into the service spillway;  
20 correct?

21 A. MR. MENNINGER: It's not quite falling back. Like  
22 I said, it's restricting the flow, similar to if you  
23 had -- you had a hose that had a certain size, and you  
24 squeezed it down a little bit, you would restrict some  
25 of the flow that goes through it. Yeah. So it's

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1           whatever -- if you have 100, and you have 30 that goes  
2           in the channel, 70 continues in the river.

3                       Now, if you had 120 and you still wanted to  
4           restrict it to 30 in the channel, then you would have  
5           90 in the river. It's just a simple split of the  
6           flows.

7       Q.   If the water hits the access bridge, how have the  
8           impacts of friction been included in the diversion  
9           inlet rating curve?

10      A.   MR. MENNINGER:           Sure. As I said, we performed the  
11           appropriate calculations to look at the effects of  
12           whether it's weir flow or orifice flow, and we  
13           performed hydraulic modeling that incorporates those  
14           physical processes to confirm those effects.

15      Q.   And what is the elevation of debris deflection barrier?

16      A.   MR. MENNINGER:           Don't have it immediately off top  
17           of my -- give me one second.

18      A.   MR. SPELLER:            Actually, Mr. Chairman, it's  
19           Wayne Speller. I was going to suggest maybe we caucus  
20           for a minute. Because we have so many virtual  
21           witnesses, we're going to jump out into a breakout room  
22           very quickly. We won't dawdle.

23      Q.   And I have one -- while you're in your breakout room, I  
24           have one matter you might just take up at the same  
25           time.

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1           If we go back to the rating curve, Figure 19.

2           Now, you mentioned that the auxiliary spillway's  
3           elevation was 1216.5, Mr. Menninger; correct? It looks  
4           like, Mr. Chair, looks like they've already taken their  
5           break.

6       **A. MR. SPELLER:**           **Some have. We'll return in a**  
7           **minute, Mr. Chairman.**

8       **MR. SECORD:**            **I lost them, sir.**

9       **THE CHAIR:**            **So what do you need for time?**

10      **MR. SECORD:**            **I don't need any time.**

11      **THE CHAIR:**            **Not you, Mr. Secord.**

12      **A. MR. HEBERT:**        **Mr. Chairman, I suspect we'll be**  
13           **quite quick. It's Matt Hebert, sorry.**

14      **THE CHAIR:**            **All right. Thank you.**

15      **A. MR. HEBERT:**        **Mr. Chairman, it's Matt Hebert**  
16           **from the Transportation Panel. I suspect our witnesses**  
17           **are now going to be reemerging from the breakout room.**

18      **THE CHAIR:**            **Thank you.**

19      **A. MR. MENNINGER:**      **So Mr. Secord, I'm back. Your**  
20           **question again was with regards to an elevation. What**  
21           **was the structure?**

22      **Q.** So I believe you indicated that the service  
23           spillway -- or sorry, yes -- was it the auxiliary  
24           spillway elevation was 1216.5; correct?

25      **A. MR. MENNINGER:**      **The top of the pilot channel for**



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1           the fuse plug, that's correct.

2           Q.   And so looking at the diversion inlet rating curve, at  
3           1217, with a water surface elevation of 1217 metres, I  
4           take it, then, that would push water into the service  
5           spillway -- sorry, the auxiliary spillway?

6           A.   **MR. MENNINGER:**        **Sure. At 1217, there would be**  
7           **water flowing through the auxiliary spillway, that's**  
8           **correct.**

9           Q.   And when I looked at the original -- when I looked at  
10          the original auxiliary spillway, it seemed to me the  
11          original design took the spillway right up to the edge  
12          of the Elbow River, but the current design has the  
13          auxiliary spillway not going to the edge of the  
14          Elbow River.

15                 So it looks to me like if you're pushing water  
16          into the auxiliary spillway, that water will have to  
17          flow towards the Bow, the Elbow River, and flood my  
18          clients' lands. And I'm just wondering, why doesn't  
19          the auxiliary spillway go -- in the PDA go right down  
20          to the edge of the Elbow?

21          A.   **MR. MENNINGER:**        **Oh, Mr. Secord, I believe we have**  
22          **a confusion on the spillways.**

23                 So we have -- there's a lot of structures on this  
24          project.

25          Q.   Let's go back to PDF page 283.

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1       A.   MR. MENNINGER:           Yes.  So you can't view the  
2       auxiliary spillway on this, so let me give you a  
3       different number so we can talk to it together.  Bear  
4       with me one moment.

5               Okay.  So document manager, if you could go to  
6       page 262.  All right.

7               So this is a larger view, you can see the  
8       Elbow River running from left to right.  The floodplain  
9       berm runs from the bottom of the page at the 0 plus 600  
10      and runs from left to right to about a little bit more  
11      than 1 plus 600.

12              Then the auxiliary spillway runs until it  
13      intersects with the service spillway.  So the auxiliary  
14      spillway still is within the Elbow River floodplain and  
15      still is adjacent to the service spillway.

16              So the way that the project functions is the  
17      floodplain berm constrains the flow within the  
18      Elbow River and directs it towards the service  
19      spillway.  The service spillway is used to control the  
20      flows, the elevation of the water within the river,  
21      which then pushes some flow into the channel.

22              At a very large flood, the gates from the service  
23      spillway would lower completely to the bottom of the  
24      river channel.

25              At that point, the majority of the flow would

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1 continue through the service spillway structure, but if  
2 waters continue to rise, then they would overtop that  
3 auxiliary spillway and provide a secondary outlet. And  
4 what that does is that allows us to reduce the amount  
5 of flow that goes into the channel in combination with  
6 that -- the breast wall/bridge that we've been talking  
7 about a lot, to all function to keep the water levels  
8 in the river to a certain level to prevent overflow, to  
9 prevent too much water from going into the channel.

10 If you go further down the channel, the emergency  
11 spillway is located along the channel and really  
12 part -- an extension of the reservoir and dam. That  
13 structure is the belt added to the suspenders.

14 The intended operations of this project is to stop  
15 flows from entering the channel once the reservoir is  
16 full, so the gates close. We have a lot of provisions  
17 in place to make sure that that happens.

18 The debris deflection barrier will keep debris  
19 from clogging or blocking the gates from closing. We  
20 have primary and backup power; we have the ability to  
21 lower those gates under their own weight without any  
22 power and using manual brakes on the gates.

23 But in all of those scenarios, if we have -- water  
24 still enters the channel and the dam is up to the  
25 emergency spillway elevation, at that point, water

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1 would go over that emergency spillway, and then it  
2 would be redirected back to the Elbow River again.

3 But as I said, that would be in an extraordinary  
4 large flood event and would constitute a malfunction or  
5 failure of the project to operate as proposed and  
6 intended.

7 Q. All right. So which figure -- what's the number of  
8 this figure? Scroll down just a little bit or up I  
9 guess, always get it wrong for the document manager in  
10 the direction. I guess it's just called "Diversion  
11 Structure Overview."

12 A. MR. MENNINGER: Yeah, the drawing number would be  
13 C201.

14 Q. Okay. So -- and it says "preliminary design, not for  
15 construction," and when was this -- this was drawn on  
16 the 25th of September last year?

17 A. MR. MENNINGER: Yeah.

18 Q. Okay. So if we could go down, document host? Do I  
19 have it right? No, I guess up then, sorry. Great.  
20 Thank you.

21 So we have the Elbow River basically running  
22 through the top portion of this figure; correct?

23 A. MR. MENNINGER: Yeah, that's correct.

24 Q. And we have the river hitting the debris deflection  
25 barrier, and then we have the bridge, the access bridge

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1           just to the I guess west, I guess in this case, it  
2           would be sort of north --

3       **A. MR. MENNINGER:            Yeah.**

4       **Q.** I guess the direction of the map actually shows north  
5           going from left to right?

6       **A. MR. MENNINGER:            Yes.**

7       **Q.** So it would be I suppose more or less west, the parking  
8           lot then would be to the east of the gates letting the  
9           water into the reservoir?

10      **A. MR. MENNINGER:            Yeah.**

11      **Q.** And under normal operations, the service spillway then  
12           would take what isn't being diverted into the  
13           reservoir, it would take the river flow off to the east  
14           down the Elbow River; correct?

15      **A. MR. MENNINGER:            That's correct.**

16      **Q.** And then you have what you call the auxiliary spillway,  
17           and you gave me the elevation of 1216.5. Is that still  
18           right?

19      **A. MR. MENNINGER:            Yes.**

20      **Q.** And is this what you call the emergency spillway?

21      **A. MR. MENNINGER:            No, it's the auxiliary spillway.**  
22           **The emergency spillway is on the channel; it's a**  
23           **completely different structure.**

24      **Q.** And is that shown on this?

25      **A. MR. MENNINGER:            Not on this drawing, no. I could**

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1 give you a reference to a different drawing to show you  
2 where that's at.

3 Q. So, before, you mentioned there were a lot of  
4 spillways?

5 A. MR. MENNINGER: Mm-hmm.

6 Q. So what is the auxiliary, the function of the auxiliary  
7 spillway doing?

8 A. MR. MENNINGER: As I said, it is a -- it adds  
9 capacity in the river to pass additional flow  
10 downstream. So when water gets above 1216.5, more flow  
11 will go down that way, and that in turn makes sure that  
12 our water surface elevations upstream of that structure  
13 are low, and so it reduces -- it reduces the amount of  
14 flow that goes then into the channel.

15 Q. So if we look at -- I think we know the Figure 19 off  
16 by heart now, but at an elevation of 1217 at the gates,  
17 that would mean that water would be being pushed into  
18 the auxiliary spillway. Would that be correct, or it  
19 would be overtopping the auxiliary spillway?

20 A. MR. MENNINGER: That's right, yeah.

21 Q. And where does that water go once it overtops the  
22 spillway?

23 A. MR. MENNINGER: It flows -- it flows through the  
24 historical Elbow River channel to the floodplain and  
25 back to the primary channel.

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1 Q. And is that area entirely within the PDA?

2 A. MR. MENNINGER: No, it's not.

3 Q. And would any of my clients be subjected to flooding as  
4 a result of the auxiliary spillway being engaged?

5 A. MR. WOOD: Mr. Chairman, I can confirm that  
6 none of the SCLG clients would be affected by that.

7 Q. What about the landowners who are there?

8 THE COURT REPORTER: I don't know who was speaking.

9 A. MR. WOOD: My apologies, it was Matt Wood.

10 Q. What about the landowners who are there, Mr. Wood?  
11 Would they be subjected to flooding?

12 A. MR. WOOD: In the case of the auxiliary  
13 spillway, you can see it in the contours in how it's  
14 graded there. When the water spills over it, it takes  
15 the floodplain area and is directed back into the  
16 river.

17 Q. So what's the answer to my question?

18 A. MR. MENNINGER: I will say, and I guess, Matt --  
19 this is John Menninger, that in that scenario,  
20 that -- so, again, if the auxiliary spillway is  
21 activated, we're looking at an event that's in excess  
22 of a 500-year flood. Areas that are within the  
23 floodplain downstream, regardless of property line,  
24 would have -- would be inundated with water but within  
25 the river system.

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1           So we have looked at the areas generally of  
2           impact, but they would flow through the river as mapped  
3           as typically shown.

4       Q.   Document host, if we could go back to Figure 19,  
5           please.

6           When you said that engaging the auxiliary spillway  
7           would be something in the order of a 500 -- 1 in  
8           500-year flood, Mr. Menninger, when I look at the  
9           diversion in that rating curve, at an elevation of  
10          1712, the flow is only 900 cubic metres per second, and  
11          I thought the flood of record was coming down at  
12          1260 cubic metres per second.

13          So how do you get to a 1 in 500-year flood when  
14          the water elevation is only at 1216.5 metres?

15       A.   **MR. MENNINGER:**        Sure.  So, again, this is the flow  
16          that's going into the channel.

17          So during a 5-year event, you would have 1800  
18          coming down the river, and that flow would be split  
19          between a series of three structures.

20          And so a portion of that flow would be going down  
21          through the diversion inlet when it would fall within  
22          this rating curve, and then -- then a portion that  
23          would flow downstream and through the service spillway  
24          and auxiliary spillway.

25          As I mentioned, we would not intentionally operate



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1 the structure to exceed 1215.8, which is shown here.  
2 And so you would have 600 going through the diversion  
3 inlet and 1200 going through the service spillway.

4 So on this curve during an operating condition  
5 when we intend to divert flow into the channel, you  
6 would be at 1215.8 and putting 600 into the channel.  
7 The 1200 would go into the service spillway.

8 Q. Right. Mr. Menninger, what happens if the diversion  
9 inlet gates are opened due to operator error,  
10 instrumentation failure, et cetera, when the off-stream  
11 storage reservoir is at an FSL of 1210.75 metres?

12 A. MR. MENNINGER: I'm not sure of a scenario of -- I  
13 don't know why you would have an unintentional  
14 operation. These are enormous structures. Our gate  
15 systems would have programming in effect that would in  
16 effect block it out from raising them in a scenario  
17 where you would already have the reservoir full.  
18 Alarms would be going off, and then on top of that, you  
19 would have to have a flood operating -- it would be  
20 pushing -- trying to push flow into it.

21 So that said, we have the emergency spillway  
22 located on the channel that will discharge flows that  
23 are in excess of 1210.75, which is that full service  
24 level as you mentioned of the reservoir.

25 Q. Now, you can turn this up if you want, but

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1 reservoir-routing scenarios are presented on page 27  
2 and 28 of Exhibit 327 and in Section 10.1.3 of  
3 Exhibit 159. And they indicate a constant diversion  
4 maintained at 480 cubic metres per second based on  
5 incremental closing of the gates. Do I have that  
6 right?

7 **A. MR. MENNINGER:** Could you repeat the page number,  
8 please, Mr. Secord?

9 Q. Pages 27 and 28 of Exhibit 327 and in Section 10.1.3 of  
10 Exhibit 159.

11 MR. FITCH: I think we need to do one document  
12 at a time. So which one do you want?

13 MR. SECORD: I didn't want either of them.

14 MR. FITCH: Well, you referred the witness to  
15 them, and you say, "If you want, you can look at them."  
16 I think to be fair to everyone who is watching, we  
17 should look at a document. Why don't we start with the  
18 first one.

19 Q. MR. SECORD: Sure.

20 **A. MR. MENNINGER:** Okay.

21 Q. You might want to scroll down, document host.

22 There we go.

23 MR. FITCH: Perhaps you can ask the question  
24 again now that we're looking at the document.

25 Q. MR. SECORD: So reservoir-routing scenarios are

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1 presented on pages 27 and 28 of Exhibit 327?

2 A. MR. MENNINGER: Yeah.

3 Q. And they indicate a constant diversion maintained at  
4 480 cubic metres per second based on incremental  
5 closing of the gates; correct?

6 A. MR. MENNINGER: Yes.

7 Q. Why has Stantec not applied the design diversion rate  
8 of 600 cubic metres per second for reservoir-routing  
9 scenarios in favour of 480 cubic metres per second?

10 A. MR. MENNINGER: Either scenario would function  
11 well, Mr. Secord. So we have in this scenario, this  
12 is -- so I'll explain the purpose of this, these two  
13 figures.

14 So this first figure shown, Figure 1, is the  
15 probable maximum flood.

16 Q. Document host, could we just scroll down -- or up?

17 A. MR. MENNINGER: So as we've discussed previously,  
18 but to repeat the probable maximum flood is generated  
19 by a -- is what's used to design structures and  
20 spillways for the -- an extreme consequence dam.

21 So in this scenario, we're modelling what would  
22 occur during a probable maximum flood if the structure  
23 were to operate for a period of time until the  
24 diversion closed.

25 As I said, that is the proposed and intended

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1 operation for the structure.

2 I will stop to say, I guess, to explain that the  
3 design diversion rate is between 4 -- so the necessary  
4 diversion for -- to mitigate for the 2013 flood is 480  
5 cubic metres per second. We have the ability to pass  
6 600 through the channel as needed and as appropriate  
7 for operations.

8 That buffer, that 25 percent buffer I think as we  
9 have explained previously was to allow for some  
10 flexibility in operations to allow for potential  
11 impacts from sediment or debris at the time of  
12 consideration. And so the operators will have some  
13 flexible range to operate the structure.

14 So in this scenario, if you were operating under a  
15 probable maximum flood, it would not be ideal to fill  
16 up your reservoir before the peak of the flood hits.

17 So in this scenario, we're showing that they're  
18 diverting at 480 to fill up the reservoir and take off  
19 some of the volume.

20 This scenario represents, on the blue line,  
21 represents the flow that's into the diversion structure  
22 from -- during that operations.

23 And so basically what you're seeing is the blue  
24 line represents the flow into the -- through the  
25 channel and into the reservoir, and then at about

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1 simulation hour 55 or so, the reservoir is full and the  
2 gates are closed.

3 So the reservoir is full, gates are closed. The  
4 rest of the flow that's in the river continues  
5 downstream.

6 Q. So basically 55 hours in the event of a PMF, reservoir  
7 is full?

8 A. MR. MENNINGER: That's correct.

9 Q. Okay. Do you agree that a simplified liquefaction  
10 triggering analysis can be used to estimate  
11 post-seismic deformed induced loss of freeboard of  
12 the dam based on the method of Rouch, et al. 2007?

13 A. MR. MENNINGER: I will defer to Mr. Back who is on  
14 the line here who is our geotechnical expert on the  
15 panel.

16 A. MR. BACK: Hello.

17 Q. Hello, Mr. Back.

18 A. MR. BACK: Could you please restate the  
19 question for me?

20 Q. I sure will. So do you agree that a simplified  
21 liquefaction triggering analysis can be used to  
22 estimate the post-seismic deformed induced loss of  
23 freeboard of the dam based on the method of Rouch,  
24 et al. 2007?

25 And maybe before you go there, could you indicate

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1           what is a simplified liquefaction triggering analysis?  
2           Maybe we could start there. And if you can, if you  
3           can, great; if you can't, that's okay too.

4       **A. MR. BACK:**                   Let me begin by saying that  
5       **liquefaction analysis is a little bit of a**  
6       **sophisticated partition of geotechnical engineering.**  
7       While I have some general familiarity with it, that  
8       would have, if that had been appropriate, would have  
9       been performed with other engineers that work with me  
10      that had more familiarity with seismic engineering.

11           I will say very adamantly that liquefaction is not  
12      a consideration with foundation soils, which we have  
13      here at the Springbank off-stream storage reservoir.

14           We have relatively stiff glacially deposited clays  
15      in large measure, and those will not be subject to  
16      liquefaction certainly not with the seismic events that  
17      we would expect here or relative to any seismic.

18      **Q.** Can you tell me what is a "post-seismic deformed  
19      induced loss of freeboard of the dam"?

20      **A. MR. BACK:**                   I'm not sure that I would use that  
21      terminology. As part of the analysis for the SR1 dam,  
22      we did seismic analysis in the way that's recommended  
23      by the CDA and other dam references.

24           We looked first at what's called a pseudo-static  
25      analysis where we simply apply a horizontal load when

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1 we're doing the stability analysis. That tells us that  
2 horizontal load is derived from the likely motions that  
3 would occur in a design earthquake. That will give us  
4 some indication of the likely stability of the  
5 structure in an earthquake.

6 According to the CDA guidelines, if that does not  
7 meet criteria, which is a factor of safety of 1.0, then  
8 additional analysis is required. And the analysis  
9 that's formed at that point is a deformation analysis.

10 That deformation analysis is what's -- the method  
11 we use, the common method is called a Newmark analysis  
12 which was developed by Dr. Newmark. That involves  
13 integrating the motions that occur during the design  
14 earthquake and establishing how much of that motion  
15 exceeds the pseudo-static factor of safety and summing  
16 up the motion that would come out of each of those  
17 pieces from the time history of the earthquake. And  
18 that gives you a -- an amount of settlement, loss of  
19 freeboard if that's the term you want to use, that  
20 would occur during the design earthquake event.

21 And that was performed at SR1, and I believe the  
22 maximum deformation that we had was 3/10th's of a  
23 metre. So that would, depending on-site nature of the  
24 critical circles for your failure surface, would result  
25 in a loss of freeboard of up to 3/10th's of a metre.

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1           There's a third analysis that's done, and that is  
2           a post-earthquake analysis. And that is after the  
3           motion stops and everything is static again, we make  
4           the assumption that the motion has caused some  
5           reduction in the sheer strength of the soils in the  
6           embankment and in the foundation. And a  
7           post-earthquake analysis is done there. That was also  
8           done at SR1, and those meet the criteria as well.

9           Q. And what was the design earthquake of record in this  
10           case?

11          A. MR. BACK:                    Again I'm not the seismic expert.  
12           We retained some seismologists from Stantec, I think  
13           they were in British Columbia, that prepared a risk  
14           analysis, a seismic risk analysis for the project, and  
15           they identified the motions that were appropriate.

16           I believe a 10,000-year recurrence interval event  
17           was used as the design event. I can't speak directly  
18           to where that motion occurred, where the source zones  
19           that those are developed from, and it would be a number  
20           of kilometres away from the site where that particular  
21           large motion would have been assumed to occur.

22          Q. And do you know what the magnitude of the earthquake  
23           was that was the design earthquake in this case?

24          A. MR. BACK:                    I believe it's a magnitude 6, but  
25           it would be probably more appropriately described by



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1 the powerful velocities that occur during it. I'm not  
2 immediately conversant with those.

3 I could look it up and get back to you with how  
4 that event would be characterized. It's in the  
5 submitted report; there's the entire seismic risk  
6 analysis report is included in the submission.

7 Q. When and at what stage of the design does AT expect to  
8 submit to the -- and I don't know if they'll be  
9 submitting it to the NRCB for review.

10 But when does AT expect to submit the draft OMS  
11 manual?

12 A. MR. BACK: Mr. Menninger may be better --

13 A. MR. MENNINGER: Yes, I was going to say I'll field  
14 that.

15 So based off the terms of our reference in our  
16 understanding of the regulatory review process, the  
17 operations, maintenance, and surveillance manual was  
18 not a part of the application for the Natural Resources  
19 Conservation Board.

20 We did not submit it. And as I understand, the  
21 Board has recognized that there is another regulatory  
22 entity that has purview over the dam safety arena.  
23 Alberta Environment and Parks dam safety division will  
24 review the operation, maintenance, and surveillance  
25 manual and -- prior to authorization to operate.

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1 Q. And would that be the same for the draft safety  
2 management plan, the storage dam commissioning plan,  
3 the off-stream reservoir dewatering plan, draft the  
4 EEP, would those all be submitted to AEP at some point?

5 A. MR. MENNINGER: That's correct.

6 A. MR. HEBERT: Mr. Chairman, just one brief  
7 moment.

8 Mr. Chairman, Matt Wood will supplement the  
9 answer.

10 A. MR. WOOD: Thank you, Mr. Chairman. If I  
11 may, I'm just going to request that Mr. Secord repeat  
12 the question. I was playing with my mask.

13 Q. Sure. I was asking Mr. Menninger about the draft OMS  
14 manual, draft EEP, draft safety management plan,  
15 draft -- storage dam commissioning plan, off-stream  
16 reservoir dewatering plan. And I was asking at what  
17 stage of the design does AT expect to submit those  
18 documents to a regulator?

19 A. MR. WOOD: These are typically items that are  
20 prepared as part of the final design, submitted at that  
21 point.

22 Q. And in terms of the timeline, is there -- do you have a  
23 timeline for that, Mr. Wood?

24 A. MR. WOOD: I don't specifically. Perhaps  
25 Mr. Svenson is aware of any timeline.

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1       **A. MR. SVENSON:**           Hello Mr. Chair. This is  
2       Mark Svenson. There's no official timeline that those  
3       documents are required by, except that they are  
4       required prior to operation or the diversion of water  
5       into the structure.

6       **Q.** Thank you, Mr. Svenson.

7               As the low-level outlet has been sized to drain  
8       the reservoir over 30 days, what are your contingencies  
9       should a dam safety incident occur that requires a  
10      rapid dewatering of the SR1 reservoir?

11             Maybe that would be for Mr. Menninger?

12      **A. MR. MENNINGER:**        Sure. So I guess to explain to  
13      the Panel. The low-level outlet works for the  
14      off-stream storage reservoir is the hydraulic structure  
15      to release waters from the dam as designed. It is a  
16      concrete structure that has gates -- it has a gate  
17      tower that controls flows into and out of  
18      the -- basically out of the reservoir, and then a large  
19      conduit that discharges flows to the Unnamed Creek.

20             The capacity of the low-level outlet works was  
21      determined based off of industry guidelines that were  
22      referenced and documented within the Preliminary Design  
23      Report. Those guidelines provide recommendations for  
24      drain times in considering the potential effects of dam  
25      safety -- a potential for a dam safety incident at the

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1 structure.

2 The design for SR1 will result -- of the low-level  
3 outlet works allows for lowering of the complete  
4 reservoir within approximately 45 days or so. The vast  
5 majority of the pool is lowered -- and if I can  
6 reference the specific. One moment.

7 So, yes, so within 40 days 90 percent of the pool  
8 would be eliminated from the reservoir, and that, as I  
9 said, meets the guidelines that we established -- you  
10 know, that were established through valuation of  
11 industry.

12 So, Mr. Secord, the proposed response is that, if  
13 an issue -- and this is again -- this is from the  
14 reservoir being completely full -- the recurrence  
15 interval associated with the reservoir being at full  
16 service level is a 1 in 200-year event or greater. It  
17 would take less time to empty it at a lower elevation,  
18 at, for instance, a 1 in 100-year has a reservoir  
19 roughly half full, and would result in a drawdown time  
20 much closer to 20 days or so. So you, in  
21 effect -- that's the case.

22 And the reason we select that, again, is based off  
23 of a review. And the industry standards are looking  
24 at -- and the reason why they have these rates are  
25 based off an acceptable level for certain conditions

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1 and scenarios, and they take that into account. So it  
2 looks at the risk of the structure.

3 I believe, you know -- and we selected the highest  
4 rating to use the most conservative value, as well as  
5 it looks at the consequences downstream. And so we  
6 took the combination of the two factors and selected a  
7 criteria for the reservoir to drain over that period of  
8 time.

9 Q. So, Mr. Menninger, I don't think you understood my  
10 question.

11 So I'm thinking here of worst-case scenarios and  
12 my question was, as the low-level outlet has been sized  
13 to drain the reservoir for over 30 days, what are your  
14 contingencies should a dam safety incident occur that  
15 requires a rapid dewatering of the SR1 reservoir?

16 So not a leisurely drain over 30 days, but a dam  
17 safety incident that requires a rapid dewatering of the  
18 SR1 reservoir.

19 So the question is what are AT's contingencies  
20 should such a dam safety incident occur?

21 A. MR. MENNINGER: I would say, Mr. Secord, that  
22 they -- a rapid dewatering of an embankment in and of  
23 itself could cause a dam safety issue alone.

24 So I'm not certain of the scenario of which you're  
25 referring. It would obviously depend on the specifics

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1 of the scenario, but the most likely dam safety  
2 incidents that we would be attempting to mitigate would  
3 be those that we would mitigate with other  
4 interventions, not a quote unquote "rapid release of  
5 the reservoir." You would control whether it was  
6 seepage or stability or other elements, and you would  
7 be implementing other interventions.

8 Q. Go ahead.

9 A. MR. MENNINGER: No, I'm done.

10 Q. So what would be an incident that would require a rapid  
11 dewatering of the SR1 reservoir? Worst-case scenarios?

12 A. MR. MENNINGER: I don't have a hypothetical  
13 scenario, Mr. Chairman, to offer.

14 Q. Okay. You mentioned that, in the event there was an  
15 issue with the reservoir, you would look at other ways  
16 of solving this situation rather than rapidly  
17 dewatering the reservoir. What circumstances were you  
18 thinking of when you gave that answer?

19 A. MR. MENNINGER: Sure. Common. And again, our  
20 design mitigates the majority of these scenarios, but  
21 often with embankment dams, there may be a seep  
22 identified on the downstream side of the dam that is  
23 indicating the potential for water flowing through the  
24 foundation or embankment. In those scenarios, you  
25 would mitigate by adding filters and other components

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1 to control the flows coming through the embankment and  
2 to arrest any transmission of material or particles  
3 from the embankment, would be a scenario of -- would be  
4 one.

5 Q. Are there others?

6 A. MR. HEBERT: Mr. Chairman, would we be able to  
7 caucus?

8 THE CHAIR: Yes, please. In fact, why don't  
9 we do that and come back at 3:15.

10 MR. SECORD: All right. Thank you, sir.

11 (ADJOURNMENT)

12 THE CHAIR: Okay, Mr. Wiebe, I think we can  
13 get started. Thank you.

14 Mr. Secord, so the panel had a few minutes, maybe  
15 not as much of a break because they were working  
16 perhaps. Is the panel ready to respond or do we need a  
17 repeat on the question?

18 A. MR. HEBERT: Mr. Chairman, the panel is back  
19 but perhaps a repeat of the question just to get us  
20 back on track.

21 MR. SECORD: Ms. Vespa, would you be so kind as  
22 to read back the question? Thank you.

23 COURT REPORTER: So we left off with the end of the  
24 question being:

25 "What circumstances were you thinking of

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1                   when you gave that answer?"

2                   Then a long answer was provided, and you asked, "Are  
3                   there others?" Is that enough or do you need the whole  
4                   previous answer?

5                   MR. SECORD:                   No, no, I think that's fine.

6                   Thank you, Ms. Vespa.

7                   A.   MR. MENNINGER:           This is John Menninger. So,  
8                   Mr. Chairman, the most -- I guess the most common  
9                   issues with embankment dams was the answer that we  
10                  gave. There's other scenarios potentially that have  
11                  very low probabilities of occurrence.

12                  But I'm struggling to understand the -- I guess  
13                  offer an additional example that would help inform the  
14                  Board at this time.

15                  Q.   Maybe I could help you, Mr. Menninger. What about a  
16                  piping failure?

17                  A.   MR. MENNINGER:           Sure. So Mr. Secord, that's --  
18                  or, Mr. Chairman, the explanation that I provided  
19                  previously. So a piping failure for a dam is a  
20                  scenario where seepage, either through the embankment  
21                  or through the foundation, carries with it materials  
22                  from the dam or foundation to the downstream side of  
23                  the dam.

24                  In that scenario, then a void could form and cause  
25                  potential issues with your structure.



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1           As I explained previously about the response to  
2 seepage, the scenario that typically is used to  
3 mitigate for that, while lowering the pool, is  
4 definitely a strategy for reducing the pressure  
5 upstream.

6           Additional measures that can be implemented to  
7 help in that scenario would be to create a filter on  
8 the downstream side, as well as add additional pressure  
9 on the downstream side often with sandbagging and other  
10 elements.

11           So, typically, you would use a graded filter and  
12 then also build up a kind of a pressure on the  
13 downstream side. That's generally the mitigation  
14 measures approved.

15           But, again, our structure has a -- for a dam that  
16 does not have a permanent pool -- has an incline filter  
17 -- should we drain that goes up the embankment as well  
18 as a blanket drain on the downstream side that are key  
19 mitigation measures to prevent piping and control  
20 seepage through the structure. We feel confident that  
21 these measures will be effective in preventing a piping  
22 scenario.

23           But in the case, if there ever were to be, those  
24 are common mitigation.

25       Q. How long would it take to place filters in the case of

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1 seepage?

2 A. MR. MENNINGER: You could do it quickly. You  
3 know, in the scenario, Mr. Chairman, under a first  
4 filling of the dam or, you know, really, in operation  
5 of the structure, there will be a lot of eyes on the  
6 dam and the surrounding area. The plants would have  
7 multiple operators on site, as well as other staff and  
8 support.

9 Often with dams and structures -- and we'll tackle  
10 this with Alberta Environment and Parks -- as the  
11 emergency management plans are developed, often  
12 material is actually stockpiled on site for response,  
13 for certain scenarios, or there are agreements in place  
14 with contractors and other elements for quick  
15 mobilization.

16 So this is a typical thing that's incorporated in  
17 almost all emergency management plans, emergency  
18 response plans for dams, is the identification of  
19 potential issues and mitigation measures associated  
20 with them.

21 Q. Now, you mentioned grading. What exactly is involved  
22 in placing filters in the case of seepage or piping  
23 failure?

24 A. MR. MENNINGER: Sure. I often realize I need to  
25 do better with communicating that term.

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1           So when I said a -- I meant to say a "graded  
2 filter." So a graded filter is a series of materials  
3 that are progressively different in size that prevent  
4 material from going from one to the next to the next.

5           So you would go from a sand to a gravel to a  
6 riprap, would be an example of a graded filter.

7           And so basically the idea is the sand stops the  
8 clay from moving; the gravel stops the sand from  
9 moving; and then the rock stops the gravel from moving.  
10 It's basically a series of materials that help to  
11 control migration of particles.

12 Q. And how would you get that material to the area where  
13 the seepage or piping failure was occurring?

14 A. MR. MENNINGER: Sure. So, Mr. Chairman, the dam  
15 has roads on the -- has a roadway on the downstream  
16 side, graded pathway for access on the downstream side  
17 of the dam, for access for equipment and other  
18 elements. So that would be the pathway.

19 Q. And you would be hauling this, then, in the event of a  
20 flood of record, potentially days of rainfall, you  
21 would be moving this material with heavy trucks, moving  
22 it with Caterpillars, cranes, that sort of equipment?

23 A. MR. MENNINGER: So, again, this is all a  
24 hypothetical scenario, but in that situation, you would  
25 likely use dump trucks and probably front-end loaders,

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1           and a couple of other pieces of equipment and such to  
2           transport and place the material.

3           Q.   Now, is SR1 a large dam?

4           A.   MR. MENNINGER:           Mmm.  It's long.  It's about 3  
5           kilometres in length.  It's moderately tall.  I would  
6           not describe it as a significantly tall dam.  At its  
7           highest is 30 metres, which is a decent size, but by  
8           other industry standards, there's much larger  
9           structures.

10          Q.   So it's an extreme consequence dam?

11          A.   MR. MENNINGER:           It is an extreme consequence dam.

12          Q.   Yeah.  Is it a small dam?

13          A.   MR. MENNINGER:           These are relative terms.  
14          Mr. Chairman, I don't know.  It depends on the  
15          reference point for the individual describing it.

16          Q.   But in terms of its FSL containing 77 million -- yeah,  
17          77 thousand dam cubed, is that a small dam, a large  
18          dam, a medium dam?

19          A.   MR. MENNINGER:           I'm afraid that I can't respond to  
20          that.  I mean it holds a significant amount of water,  
21          as you said, 77 million cubic metres.  I think that's  
22          appropriate for me to answer that that is the design  
23          volume.

24          Q.   Can you tell me, did Stantec or AT use the United  
25          States Bureau of Reclamation design of small dams to

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1 size the low-level outlet?

2 A. MR. MENNINGER: The reference is not the US Bureau  
3 of Reclamations design of small dams. And so -- and I  
4 guess that tells you a little bit of differential too.

5 The USBRs description of dams, small dams, this  
6 would be a small dam in their guidelines -- or at least  
7 in their reference points. They operate the Hoover  
8 Dam.

9 Q. Right.

10 A. MR. MENNINGER: So that gives you a scale  
11 differential here.

12 We did not use small dams to design the drawdown  
13 capacity. We did use it for some of the reference  
14 points for the hydraulic analysis of the low-level  
15 outlet works.

16 Q. And is there a definition for a large dam,  
17 Mr. Menninger? Are you a dam builder?

18 A. MR. MENNINGER: I -- in my career, I have worked  
19 on quite a few dams in different capacities, some that  
20 are larger and some that are smaller than SR1.

21 Q. But are you familiar, is their definition for a large  
22 dam or is there a large dam definition that you're  
23 aware of in your career working in the area?

24 A. MR. MENNINGER: I'm not aware of a criteria that  
25 would define something as a large dam.

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1           A lot of times dam safety criteria will define a  
2 height of a dam or a reservoir pool as an element of a  
3 hazard classification. That's not the case in Alberta,  
4 but -- yeah. Often times there's different levels of  
5 classifications so stay with that.

6 Q. So what was the accuracy of the flood forecasting  
7 during the 2013 floods for Calgary?

8 A. MR. WOOD:                   Mr. Chairman, I can't speak --  
9 sorry, it's Matt Wood here with AT. I can't speak  
10 specifically for the accuracy of the flood forecasting  
11 on the Elbow. But what we can say is that the  
12 information was limited to some hydrometric stations  
13 and the weather forecasting, and I believe, as  
14 Mr. Menninger had mentioned earlier, some of those  
15 stations had washed out during the event.

16 Q. Were they able to accurately predict water levels as  
17 required for the operation of the SR1 off-stream  
18 storage reservoir?

19 A. MR. MENNINGER:           So, John Menninger speaking.  
20           The SR1 reservoir will utilize water level  
21 measuring at the site to be installed for the project  
22 for operations.

23           I -- in speaking -- and Mr. Wood may add on to  
24 this, but speaking with Mr. Frigo of the City of  
25 Calgary and those at Alberta Environment and Parks,

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1           they did have advanced warning that a large flood was  
2           expected within, I believe, from my recollection,  
3           several -- you know, a couple of days in advance. They  
4           were expecting to be ready for an event.

5           The ultimate magnitudes in forecasts in a system  
6           like the Elbow River are more difficult to understand,  
7           but they did know that a flood was coming and started  
8           preparations in advance.

9           That is the type of warning that would be  
10          necessary for operations of SR1 to mobilize staff to  
11          the site, prepare the site for operations, and be ready  
12          to move.

13        A.   MR. WOOD:                    If I may add to Mr. Menninger's --

14        Q.   Sure, go for it.

15        A.   MR. WOOD:                    Thank you, Mr. Chairman, thank you  
16          Mr. Secord.

17        THE CHAIR:                        Mr. Wood speaking.

18        A.   MR. WOOD:                    Mr. Wood, my apologies. Yes, it's  
19          Mr. Wood.

20          One of the things that AEP has committed to is to  
21          add a what they call a forecasting node at SR1. So  
22          they have a large forecasting network. It's a computer  
23          system that models and uses measured data. And in that  
24          network, they've offered to add a node there so that  
25          they have a specific forecast point for SR1.

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1           And if I may, there's one other thing just coming  
2 back to what John said earlier about the water level.  
3 You know, technically with this structure, the  
4 structure in itself is its own gauge, and there is,  
5 although it's not a desirable way to be operating,  
6 while not desirable, the operator could simply look at  
7 a gauge on the wall of the head pond and operate the  
8 system. It's very simple in that sense.

9           So it doesn't need sophisticated forecasting. It  
10 doesn't need sophisticated hydrometric monitoring to be  
11 able to mitigate flooding as per its purpose.

12 Q. So basically the planned additions to the flood  
13 forecasting consist of this additional node that AEP is  
14 putting in, plus you said you had a -- some sort of  
15 monitor on the head pond?

16 A. MR. MENNINGER: We'll have multiple redundant  
17 monitors on the head pond and downstream, yes.

18 Q. What do you mean by the "head pond"?

19 A. MR. MENNINGER: Sure. That's the area upstream of  
20 our gates. It's basically the river for 365 days a  
21 year for ten -- for ten years running before we  
22 operate. And then when our gates -- when our gates in  
23 the service spillway rise, it will create a small,  
24 quote unquote, "head pond" upstream.

25 Q. Did I understand from Mr. Wood you might have some type



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1 of automated function where, once the head pond reaches  
2 a certain level, the gates then would open  
3 automatically without any human intervention, kind of  
4 like a car that drives itself?

5 **A. MR. MENNINGER:** I actually believe that Mr. Wood's  
6 comment was the opposite, Mr. Chairman.

7 The gates will allow for some control in  
8 specifically in the service spillway. The diversion  
9 inlet gates will not open until somebody unlocks them  
10 and then goes and presses the button. That opens up  
11 the diversion channel.

12 There is no reason to automate those gates. They  
13 are a, lack of a better term, they're binary; they're  
14 open or they're closed.

15 The service spillway gates are the ones that  
16 control the water level in the river as I mentioned  
17 previously.

18 And I believe Mr. Wood's comment is that there  
19 will be what's called a staff gauge that's painted on  
20 the side of the concrete that will say what elevation  
21 the water is at, and that is the only thing we need to  
22 know to know how much water is going into the channel  
23 is what is the water level on the side of the  
24 structure, and that will in turn tell us how much water  
25 is going into the channel.

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1 Q. So the service spillway gates, those are the ones that  
2 can be operated incrementally?

3 A. MR. MENNINGER: Yes.

4 Q. And as you mentioned, the inlet gates have basically  
5 two features: On or off, up or down?

6 A. MR. MENNINGER: Yeah. Well, they can control  
7 flows slightly; they're not meant to be an operating  
8 gate. But no, if you close them, as you lower them,  
9 they will restrict flow into the channel.

10 Q. So they can be operated incrementally as well?

11 A. MR. MENNINGER: Sure.

12 Q. They're not totally binary, then?

13 A. MR. MENNINGER: No. The simplest purpose for them  
14 is that. During normal operations through -- up and  
15 through the design event, they are not proposed for  
16 operating control of flows.

17 During a dam safety event or an event that exceeds  
18 our design event, they would lower. And so in doing  
19 that, and in lowering, they would throttle the flow up  
20 until the point that they're closed.

21 Q. So I'd asked you, at least it appeared to us that the  
22 low-level outlet was sized based on the US Bureau of  
23 Reclamation small dams manual, and you indicated that  
24 under the UBR, this would be a small dam.

25 A. MR. MENNINGER: So the reference for the drawdown

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1 was the ACER Technical Memorandum Number 3, "Criteria  
2 and Guidelines For Evacuating Storage Reservoirs and  
3 Sizing Low-Level Outlet Works, US Bureau of Reclamation  
4 1990."

5 Q. And that was used by Stantec?

6 A. MR. MENNINGER: That is the reference incorporated  
7 within the Preliminary Design Report and included in  
8 Exhibit 159, page 200, Section 10.4.2.

9 Q. And can you provide justification on why the SR1  
10 storage reservoir should be considered a small dam?

11 A. MR. MENNINGER: I did not characterize it as a  
12 small dam.

13 Q. So it's not a small dam?

14 A. MR. MENNINGER: Mr. Chairman, I think I answered  
15 this question previously. There's -- I don't -- the  
16 relevance or the -- it takes a reference point.

17 I can tell you if the dam is bigger than another  
18 dam given the criteria. I can tell you that the dam is  
19 up to 30 metres tall and has -- and has -- what the  
20 storage capacity is.

21 Q. We note that the physical modelling was conducted at a  
22 scale of 1 and 16. Can you advise why a 1 and 16 scale  
23 model was developed as opposed to a 1 in 20 scale  
24 hydraulic model?

25 A. MR. MENNINGER: A 1 in 16 is bigger, meaning that

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1           it gives us an opportunity to better model some of the  
2           elements that we were looking to model.

3           Mr. Chairman, for the Board's benefit, a physical  
4           model is a scale representation of a proposed design.  
5           In this case, we constructed a replica of the SR1  
6           diversion structure and a portion of the Elbow River in  
7           a lab in Ottawa that was exactly 1/16th of the size of  
8           the proposed design.

9           We were limited to 1 in 16 because that was the  
10          largest lab we could find. The model was half of a  
11          football field in size. It was 30 metres by 50 metres  
12          in scale.

13          So we chose 1 in 16 because that was as big as we  
14          could fit within a laboratory in the United  
15          States -- or I'm sorry, not in the United States, in  
16          North America. We looked at both. We looked at both  
17          in the United States and in Canada.

18        Q. Now, many flow discharge scenarios were considered for  
19        the diversion structure. Can you tell me, will  
20        this -- will these various flow discharge scenarios  
21        lead to difficulty during operations in an emergency?

22        A. MR. MENNINGER:           If the question could be  
23        clarified? What scenarios?

24        Q. Well, can you clarify what you intend to provide to  
25        operators to allow for a simple operation? Maybe

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1           that's a better question.

2       **A. MR. MENNINGER:**           Sure. The general operations  
3       approach for the project is fairly straightforward.

4           The operations of the structure will not commence  
5       until flows in the Elbow River exceed 160 cubic metres  
6       per second. That is the capacity of the outlet works,  
7       the low-level outlet at Glenmore Dam.

8           So, in essence, when flow through SR1 is 160, and  
9       roughly there's not much difference downstream to  
10      Glenmore, then flow out of Glenmore will be 160, and  
11      Glenmore won't store anything.

12           So that's why that number is selected.

13           Once that threshold is exceeded, we'll start to  
14      raise -- you know, first we'll open those diversion  
15      inlet gates to make sure water can go into the channel,  
16      and then we'll begin to raise the water surface  
17      elevation within the service spillway.

18           Simply, we can continue in that operating  
19      framework of a constant flow over those gates. So the  
20      water level may rise, but the flow over the gates will  
21      stay the same -- or the height of flow over the gate  
22      will stay roughly the same. And that will make sure  
23      that 160 continues downstream, and then the remainder  
24      of the flow will be pushed into the channel.

25           So in essence, the gate operator will have -- they

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1 know what the height of their gate is and they know  
2 what the height of the water in the channel is. The  
3 computer will tell them what the depth of the flow over  
4 that gate is, and they'll know what the flow going  
5 downstream is. And basically they'll maintain that  
6 depth.

7 After -- once the water level gets up to 1215.8,  
8 at that point, that's the maximum diversion that we  
9 want to get to. That's that 600 cubic metres per  
10 second going into the channel.

11 Once you receive that level, you're then moving  
12 the gates, if the flows are still increasing, you're  
13 now going to the mode of just lowering the gates to  
14 make sure the water doesn't exceed 1215.8.

15 It's basically that straightforward. It's on the  
16 rising limit of hydrograph, you're chasing a depth over  
17 our service spillway gates, so it's the simple two  
18 numbers: What's my water surface elevation upstream  
19 and what's my gate elevation. And then on the  
20 receiving on the -- as the water continues -- or flows  
21 continue to increase, once you get past -- once you get  
22 up to that max level, then it's simply chasing that  
23 elevation of lowering and raising my gates to maintain  
24 my diversion elevation up until the receding limb falls  
25 and we're back to the lower flow.

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

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1           So basically there's just a two-threshold  
2 component.

3           If you exceed all of those things it's just gates  
4 on the ground, and water is split between the two  
5 structures.

6 Q. And is there any automated function to that or is it a  
7 case, then, of the operators having to react to  
8 readings that are coming into -- is there a control  
9 room of some sort?

10 A. MR. MENNINGER:           There is a control room and there  
11 will be computers with potential automation. We're  
12 working with the operators to understand the needs of  
13 their staff. I imagine that there will be a  
14 combination of both. The control logic for the gates  
15 will have options for automation, but I can also  
16 imagine that the operators may want to utilize manual  
17 controls in certain scenarios.

18 Q. So in terms of the flood of record, the design flood,  
19 have you modelled what would be the likely scenario for  
20 an operator in the control room raising the gates?

21           So say you had June 2013 flood coming at you, have  
22 you modelled how these gates would be incrementally  
23 operated sort of on an hour-by-hour basis?

24 A. MR. MENNINGER:           Yes.

25 Q. And what would that look like from start to finish?

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

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1           When would the gates be down on the floor? Over what  
2           period of time would you have them basically raised to  
3           their maximum height and then drop down? What does  
4           that look like?

5       **A. MR. MENNINGER:**           So the -- during operations, the  
6       gates will always -- during the 2013 flood event for  
7       the most part, they are operating. Even at 1240,  
8       they're not lowered to the ground because that's not  
9       the scenario where they would have them lowered fully;  
10      they are still up there still raised -- in a slightly  
11      raised position during that -- even at 1240 in the  
12      river.

13                So perhaps some additional clarification. What  
14      type of information are you looking for in that  
15      scenario?

16      **Q.** I'm just wondering over what period of time would the  
17      operators expect to be really needing to even control  
18      the gates in the event that a 2013 flood came at them?  
19      How much of the time would they actually be actively  
20      engaged given that the reservoir, it looks like, is  
21      going to fill within, what, I think it was -- I can't  
22      remember the reservoir fill time, but it's what?

23      **A. MR. MENNINGER:**           Two days. Two days.

24      **Q.** Yeah, two days. I was going to 50 hours --

25      **A. MR. MENNINGER:**           Sure. When the gates are in



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1 operation, the -- it's a -- you monitor their positions  
2 and you make adjustments accordingly throughout. This  
3 is not a --

4 A. MR. WOOD: Mr. Chairman, if I may. I believe  
5 what my colleague Mr. Menninger is trying to say is  
6 that the AEP will be attentive to the gates throughout  
7 the operation. It doesn't matter at what point on the  
8 front end or the back end.

9 And the amount of time is really dependent upon  
10 the flood and specifically the amount of time that  
11 flows are over 160 in the river.

12 A. MR. MENNINGER: Yeah.

13 Q. But it seems to me this would be kind of a two-day  
14 operation, and I'm assuming there would be, what, maybe  
15 four shifts of people coming in to sort of man the  
16 operation over that 50-hour critical period?

17 A. MR. MENNINGER: As I said, we're still discussing  
18 with Alberta Environment and Parks, the eventual  
19 operator, on how they would choose to operate, but they  
20 would anticipate, it's my understanding, that they  
21 would utilize shifts, and that they would not have the  
22 same operators on site for two days.

23 Q. And in the event of a probable maximum flood, then, the  
24 gates would be on the floor? There would be nothing  
25 for the operators to do once the reservoir was full;

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

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1 correct?

2 A. MR. MENNINGER: They would -- you're correct, they  
3 would not be operating the diversion structure, but  
4 they would certainly be assisting in any way they can,  
5 whether it would be in monitoring the structure -- one  
6 structure or assisting others.

7 Q. But in terms of the gates themselves, they would be  
8 lowered; correct, or would they still be operating the  
9 gates?

10 A. MR. MENNINGER: You can operate the structure to  
11 divert a portion of the probable maximum flood up until  
12 the reservoir is full, and then you would close them.

13 Q. And at that point -- but the ones that are operated  
14 incrementally, would they be lowered in a PMF scenario?

15 A. MR. MENNINGER: Once the reservoir is full or the  
16 peak level in the river exceeds a certain threshold.

17 Q. And what happens if the gates were not lowered in the  
18 event that a certain threshold was exceeded?

19 A. MR. MENNINGER: Could you be more specific --

20 Q. I'm just trying to pick up on your response,  
21 Mr. Menninger.

22 A. MR. WOOD: Mr. Chairman, I believe what  
23 Mr. Secord is looking for is a scenario where SR1 is  
24 full, the diversion inlet gates have shut and the  
25 service spillway gates are down lower to the river.

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1           And your question is what if the service spillway gates  
2           do not lower down to the river? At that case, the  
3           gates would still be up, the head pond, as  
4           Mr. Menninger described it, would still be present and  
5           it may be rising and that's when the auxiliary spillway  
6           would activate and allow that water to pass without  
7           circumvention of the diversion structure floodplain  
8           berm.

9           A.   MR. MENNINGER:           And this is John Menninger again.  
10           To just reiterate, the probable maximum flood 1 in a  
11           100,000 to 1 in a million-flow scenario, and the  
12           service spillway gates have multiple provisions for  
13           lowering in addition to, they have -- you have the  
14           standard methodology, there are valves that you can  
15           bleed off the air and they will lower underneath the  
16           weight of the water.

17                        So there is -- and then there's auxiliary  
18           spillway, as Matt said, to discharge additional flow.

19           Q.   At this stage, would it be fair to say that you would  
20           not have anticipated response times for operators to be  
21           dispatched in advance of a flood for the successful  
22           operation of the SR1 intake and diversion structures?

23           A.   MR. MENNINGER:           Could you please repeat that  
24           question?

25           Q.   Do you have anticipated response times for operators to

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

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1 be dispatched in advance of a flood for the successful  
2 operation of the SR1 intake and diversion structures?

3 A. MR. WOOD: Mr. Chairman, it's Matt Wood here.  
4 I can answer that.

5 Q. Sure.

6 A. MR. WOOD: If I could request that the  
7 document controller please switch to Exhibit 218,  
8 page 23. It shows the operational flowchart for SR1.  
9 I'll wait for you to bring it up.

10 I'm going to repeat that. It is Exhibit 218,  
11 PDF page 23.

12 This operational flowchart that we see here was  
13 developed by AT with AEP and the City of Calgary who  
14 operates Glenmore. It shows how the two structures  
15 interact, and how AEP plans to operate the system.

16 What I wanted to draw the Board's attention to is  
17 the area in the bottom left of that page. You don't  
18 necessarily need to zoom in, but we could, but in the  
19 bottom left of that page, it talks about 24 hours prior  
20 to a flood. And there is a box there specifically that  
21 shows that, you know, in these certain scenarios, if a  
22 forecast suggests that SR1 may need to operate --  
23 again, I'm going back to that node that AEP will be  
24 adding to their forecasting network, then there will be  
25 24-hour staffing of SR1. And so AEP will travel out

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1           there to address that.

2           Q. Thank you. Now, you can take that down if you want,  
3           document host.

4                     Can you please provide clarification on changes in  
5           anticipated water diverted if the peak of the  
6           hydrograph is missed by one hour as a result of  
7           response time?

8           A. MR. MENNINGER:           It would depend on the hydrograph.

9           Q. So in a design flood.

10          A. MR. MENNINGER:           You're speaking --

11          Q. Sorry, Mr. Menninger?

12          A. MR. MENNINGER:           You're speaking of the 2013 flood.

13          Q. Yes.

14          A. MR. MENNINGER:           Simply a one-hour change?

15          Q. Yes.

16          A. MR. MENNINGER:           It would not -- I mean there is  
17          built-in redundancy in our system.

18                     As I said, the diversion capacity for SR1, the  
19          required diversion rate is 480 cubic metres per second.  
20          If we were delayed an hour in raising of the gates, we  
21          could divert more, up to 600. And I guess just simple  
22          480 divided by, you know, that 120 extra over 4 hours,  
23          so within four hours you'd be caught up, you know,  
24          basically.

25          A. MR. WOOD:                Mr. Chairman, if I may draw the

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1 Board's attention to Mr. Menninger's earlier comment  
2 about automation.

3 You know, while it's not always wise to have  
4 everything fully automated, these are being considered  
5 as redundancies. Something like that could help  
6 address this.

7 Again, you know, AEP may not choose to operate if  
8 no one is there watching it, but there is the ability  
9 to mitigate things like Mr. Secord is suggesting. But  
10 as my colleague, Mr. Menninger mentions, you know in  
11 the 2013 flood, an hour would not have made a  
12 difference.

13 Q. Could you provide clarification on changes in the  
14 anticipated water diverted if the peak of the  
15 hydrograph is missed by two hours as a result of  
16 response time?

17 A. MR. WOOD: Mr. Chairman, we have not done  
18 this analysis. We would have to look at the hydrograph  
19 and undertake this.

20 Q. Can you tell me what are your contingencies during  
21 first fill that would satisfy the requirements for a  
22 first-fill plan?

23 A. MR. MENNINGER: So the first-fill plan has not  
24 been completed to date. However, I can advise the  
25 Board that it will include a robust monitoring plan

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1 during the filling, including the array of geotechnical  
2 instrumentation that will be installed during  
3 construction and will be maintained during  
4 post-construction period and through operations. That  
5 would include piezometers and settlement plates and  
6 other components.

7 The first fill plan will include provisions for  
8 the resources to be located on site for inspection and  
9 monitoring during the operations to monitor the  
10 performance of the structures, including the dam  
11 spillways, et cetera. And then it will, in concert  
12 with the emergency response plans, have provisions for  
13 response to various scenarios for mitigation.

14 Q. What are summit plates?

15 A. MR. MENNINGER: I mumbled. Settlement plates.

16 Q. What do they do?

17 A. MR. MENNINGER: They are simply monuments of which  
18 you survey to observe whether or not the embankment has  
19 settled.

20 Q. And the function of the piezometers?

21 A. MR. MENNINGER: Piezometers measure water levels  
22 within the -- where they're located hydraulically or  
23 hydraulically connected. So a piezometer would tell  
24 you what is the groundwater elevation in various  
25 strata. They would be placed within the embankment and

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

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1           within the foundations of the soils.

2           Q.   And would those piezometers be monitored then manually  
3           or would they be -- is there a way to -- I'm familiar  
4           with piezometers in terms of contamination of sites.

5           A.   MR. MENNINGER:           Mm-hmm.

6           Q.   But is there a way for these piezometers to be  
7           monitored remotely, or is this a case of somebody  
8           having to go from one to the other and put a pail down  
9           and find out what's in there?

10          A.   MR. MENNINGER:           So, there are -- you know,  
11          through, I think that part of that will be in  
12          discussions with the operator for the long-term  
13          operations of the program during construction.

14                 Our monitoring program is anticipating the use of  
15                 an automated data acquisition system that would utilize  
16                 data loggers that are then tied to computer systems,  
17                 that are then tied to communication networks.

18                 So you can easily wire up a series of  
19                 instrumentations and logs to -- through, and add a  
20                 position system, for display and recording all  
21                 electronically.

22          Q.   So will these settlement plates and piezometers, will  
23          they help to address the potential risk to the  
24          structure as a result of a first fill?

25          A.   MR. MENNINGER:           Settlement plates would have less



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1 benefit. They would be part of just the monitoring of  
2 the performance of the embankment before the first  
3 fill. So they would give you some indication that  
4 there's settlement that wasn't anticipated.

5 The piezometers, on the other hand, could provide  
6 advanced or early warning of potential effects within  
7 the foundations of -- within the foundation of the dam  
8 for elevated pore pressures or connections. So, yeah.

9 Q. Are there any other elements of the first fill plan  
10 that would address and minimize the potential risk to  
11 the structure?

12 A. MR. MENNINGER: I think one of the key things is  
13 visual observation and -- during those elements and  
14 having the appropriate communications strategies and  
15 plans and the appropriate contingencies in place,  
16 including the mitigation measures or intervention  
17 measures as I said.

18 A. MR. WOOD: Mr. Chairman, if I may, one of  
19 those mitigation measures is the ability to shut the  
20 diversion in the gates.

21 So as Mr. Menninger mentioned earlier, if a  
22 problem is revealed through the piezometers or the  
23 settlement plates, the operator, AEP, will have the  
24 ability to shut the inflow to the dam to help manage  
25 the situation.

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1       A.   MR. MENNINGER:        Yeah, and my colleague, Mr. Back,  
2       I think would remind me that we also will be monitoring  
3       the flow through the drain system for the dam.

4                So we have, as I mentioned, the chimney drain and  
5       a blanket drain on the downstream side so -- and we  
6       have pipes that come out of that in daylight. So we'll  
7       be able to monitor all the flows coming, if there are  
8       any, coming through the embankment, both quantity of  
9       flow and its characteristics, whether or not it has --  
10      is carrying any other particles or other elements.

11      Q.   So as the intervals between filling operations is  
12      potentially likely to be long and operator familiarity  
13      with the structure operations during flood flow  
14      operations will not become routine hopefully, are you  
15      able to provide any clarification on the operator  
16      training, site surveillance, and intervals at which  
17      these will be undertaken?

18      A.   MR. MENNINGER:        I cannot provide specifics on the  
19      frequency of the training and operations other than it  
20      will be frequent. You know, the structure will be  
21      operated for -- and I actually would invite  
22      Yvonne Carignan from Alberta Transportation to provide  
23      a more thorough response from the government.

24      A.   MS. CARIGNAN:         Yes, Mr. Chairman. I am somewhat  
25      familiar with Alberta Environment's operating

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1 procedures related to this. It's Yvonne Carignan,  
2 sorry.

3 So based on my experience with their other  
4 operations, and I don't expect this site to be any  
5 different, they would have annual reviews with  
6 downstream stakeholders regarding the operations if  
7 they were required, and this would be completed in  
8 advance of flood season.

9 As well, typically at their other facilities,  
10 they're what they call "exercising the gates," which  
11 means that they practice opening and closing them and  
12 reviewing all of their emergency procedures to ensure  
13 that they are prepared in the event that they need to  
14 operate.

15 Q. Mr. Menninger, would you have to go from one settlement  
16 monument to another to survey them manually? And maybe  
17 you can let me know how many settlement monuments would  
18 be expected to be placed here, and how long would it  
19 take to get the data to the engineer and relay a  
20 decision to site?

21 A. MR. MENNINGER: Sure. So settlement is a slow  
22 process in geotechnical engineering in general.

23 So it's not a time-sensitive scenario. And if we  
24 were to do an annual survey of the monuments, it would  
25 be done in advance of flood season, and so that there

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1 would be any adverse effects that were observed.

2 If there were to be settlement of the nature that  
3 would be of an urgent matter, it would be visually  
4 observed. I will say that.

5 A. MR. WOOD: Mr. Chairman, if I may remind,  
6 during the 2013 event, it took -- it would have taken  
7 about 3.8 days for SR1 to fill, so plenty of time to  
8 survey those monuments if it was warranted.

9 Q. Do you have a preliminary inspection checklist,  
10 including key items for review during the first fill  
11 and subsequent water diversions?

12 A. MR. MENNINGER: It has not been developed yet but  
13 will be as part of the dam safety application and  
14 typical procedures for dams.

15 Q. Now, I think you provided clarification on how the  
16 operator will know at what point to divert water into  
17 the SR1 reservoir. And basically as I understand it,  
18 anything over 160 cubic metres per second, you start to  
19 divert; correct?

20 A. MR. MENNINGER: That is the threshold for  
21 diversion. That does not mean that the operator has to  
22 divert.

23 If, based off their information, it's going to go  
24 to 170, then drop back down in the next couple of  
25 hours, it may not be worth -- the water might not make

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1 it to reservoir; it may just dry up in the channel.

2 So there are conditions different that would --  
3 that would may differ. But typically for larger  
4 events, that is that threshold and would be the  
5 proposed operating scheme.

6 A. MR. WOOD: Again, Matt Wood here, if I may,  
7 for the benefit of the Board. The exhibit I referred  
8 to earlier, you don't need to bring it up, but that  
9 also shows those considerations for operation.

10 Q. And I think you have indicated certain conditions when  
11 diversion would cease, but are there other -- other  
12 circumstances that we haven't discussed where -- or  
13 other conditions that we haven't discussed where  
14 diversion would cease?

15 A. MR. MENNINGER: The conditions primarily are,  
16 number one, if the reservoir is at capacity, diversion  
17 will cease. If the water level -- if the flows drop  
18 below 160, diversions will cease.

19 And then the other one is that, as the mitigation  
20 measure mentioned earlier, that if there are observed  
21 issues with the dam or the channel that would require  
22 intervention, then the gates would be lowered and  
23 diversions would cease.

24 Those are the three scenarios.

25 Q. And I think you've addressed this to some degree in

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1 terms of what are the anticipated windows of time in  
2 order to respond to an emergency, and what are the  
3 mobilization times for various personnel, equipment,  
4 and materials.

5 Obviously, you would expect to have personnel on  
6 site fairly -- you know, fairly soon in the event of a  
7 flood event occurring. So that would deal with the  
8 personnel.

9 But what about equipment? What would be the  
10 anticipated windows of time to get equipment on site?  
11 Or would they -- would equipment be on site 24/7?

12 **A. MR. MENNINGER:** I think some of those plans are  
13 still in development, but I think with -- in  
14 coordination with Alberta Environment and Parks, those  
15 will be established and be part of our flood action  
16 plan and incorporated within our submission.

17 **Q.** So my understanding is the intent is not to provide  
18 stop logs for the intake diversion, and the window of  
19 opportunity for low water is estimated at two months.  
20 Can you please provide clarification on how major  
21 maintenance such as gate rebuilds, which typically take  
22 longer than two months to complete, will be undertaken  
23 in the future?

24 **A. MR. MENNINGER:** I'm uncertain of the two-month  
25 reference that you're providing. Could you clarify?

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1 Q. My understanding is it will take two months for the  
2 water to be removed from the reservoir; correct? 60  
3 days, or is it 30 days, I guess?

4 A. MR. MENNINGER: Okay. So the gates are  
5 above -- and you're speaking of the diversion inlet  
6 gates?

7 Q. Yes.

8 A. MR. MENNINGER: They're above the reservoir  
9 elevation, and they're above the normal water levels of  
10 Elbow River. They sit in the dry.

11 Q. So if they needed to be overhauled, then there would be  
12 no issue, given their elevation?

13 A. MR. MENNINGER: Correct. I mean if it was long  
14 enough and they needed to be to a greater degree, a  
15 temporary cofferdam could be constructed. But I don't  
16 see that as being a typical; that would be a very rare  
17 occasion.

18 A. MR. WOOD: If I may, Mr. Chairman, you know,  
19 it would be I think safe to assume that AEP would not  
20 be looking to overhaul gates immediately after a flood.  
21 This would be something that would be planned well in  
22 advance as part of the maintenance program and would be  
23 planned outside of the restricted activity period in  
24 the river and at periods of low flow to mitigate the  
25 risk of overtopping of any cofferdams.

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1 Q. Can AT clarify your intentions for public safety and  
2 security at the facility, including warning systems and  
3 intended means and methods to keep the public from  
4 accessing the dry reservoir and/or alerting the public  
5 that the reservoir is about to be filled.

6 A. MR. WOOD: Mr. Chairman, would we be able to  
7 caucus on this? We can be quick.

8 THE CHAIR: Yes, please.

9 A. MR. WOOD: Thank you, Mr. Chairman. We're  
10 back now.

11 THE CHAIR: Thank you.

12 A. MR. MENNINGER: So, Mr. Chairman, I should start  
13 with the safety of the public has been a key  
14 consideration of many of the items that we've  
15 incorporated within the design of SR1.

16 And I'll start with, you know, many of our  
17 spillway structures you'll notice do not maintain  
18 permanent water pools in them. Typical for hydraulic  
19 structures at dams would be to have stilling basins  
20 that have a low point that would have water in it full  
21 time. As this is a large site that's difficult to  
22 control access, we've incorporated design measures to  
23 eliminate pools like that that could be a potential  
24 drowning hazard to the public as an instance.

25 Many of our structures, all of our structures that



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1 have fall potential have railings and other  
2 fall-protection measures that if the public were to,  
3 you know, to be on, that they would then -- there are  
4 railings and other components to assist.

5 The service spillway gates, among some initial  
6 concepts and in many diversion-type structures, they  
7 are an elevated weir that could present -- provide  
8 potential for hydraulic rollers and other things  
9 downstream. These sit at the flush bed of the river  
10 and allow for that component.

11 So just to start with, safety has been that --  
12 that piece of it has been a concern and has been  
13 definitely at the forefront of the design team through  
14 the process.

15 So with regards to the public, we're handling  
16 safety in a couple of ways: Number one, restricting  
17 access to areas of security for the property, and that  
18 could potentially be more adverse to the public if they  
19 were to access. The area in and around the diversion  
20 structure, including the control building will be  
21 fenced with chain-link fence and security materials in  
22 that area.

23 The remainder of the site -- so that's a fairly  
24 limited location, I should say. It's that parking lot  
25 I think that we looked at before on the drawings.

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1           Generally that area will be fenced to prevent -- that's  
2           really the only location where we have high walls and  
3           things like that that could be a potential of serious  
4           concern for fall.

5           The other areas of the site will be designated by  
6           the project, you know, with fencing for property  
7           fencing to -- and with notification that they're  
8           entering a project and location, and then there will be  
9           significant signage throughout to inform the public,  
10          both along the Elbow River and throughout the  
11          reservoir, of their presence within the SR1 site and  
12          its function as a flood control reservoir.

13          So there is kind of -- so basically, number one,  
14          there's the design; two, there is kind of the hard  
15          access requirements from that kind of the high security  
16          areas; three, there's the more passive property  
17          designation and notification; and then the final piece  
18          here is the signage -- or four is signage and  
19          communication; and then five would be the additional  
20          layer of requirements prior to any operation, including  
21          inspection of the facilities in advance and clearing of  
22          the potential public.

23          We do anticipate that the emergency management  
24          plan or the flood action plan will also incorporate  
25          notification of nearby -- potentially nearby affected

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1 areas as well. So...

2 Q. Mr. Menninger you mentioned security materials at the  
3 parking lot. What were you referring to there?

4 A. MR. MENNINGER: Primarily just -- it's the  
5 chain-link fence and locks.

6 Q. Okay. So it's not proposed, then, that people will be  
7 flocking to the parking lot to see the gates rise on  
8 the Elbow River?

9 A. MR. MENNINGER: They will not be permitted.

10 Q. And you're not going to have school kids standing on  
11 the access bridge gawking at the water as it flows  
12 through into the reservoir?

13 A. MR. MENNINGER: They are not permitted, although  
14 they could stand at the top of the slope and have a  
15 nice safe distant view of it.

16 Q. What do you mean by the "top of the slope"?

17 A. MR. MENNINGER: The channel has a large long slope  
18 downstream of the diversion structure. The channel is  
19 about 35 metres deep, and it's a big, large vista from  
20 up top there.

21 So that's an area that would be outside limits of  
22 the project that if somebody wanted to observe the  
23 project from a safe distance and be outside of the  
24 project area, it's a potential location where they  
25 could observe. They would probably be on private land

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1 at that point, though, so they would have to obviously  
2 clear that with the member if they were to access it.

3 Q. And in terms of the reservoir itself, will there be  
4 attempts to keep school kids and others off the top of  
5 the reservoir structure as it's being filled?

6 A. MR. MENNINGER: We would certainly propose that  
7 during operations, that the area is a control location  
8 and that it should only be accessed by the staff that  
9 are in operations or those that are assisting them in  
10 operations of the dam.

11 This is a -- but, again, this structure will be  
12 operated likely on the order of a once-every-ten-years  
13 event, and for a couple of months, you know, a  
14 month-long window at a time. During other time periods  
15 and times, access to the public could be.

16 Q. And the parking lot itself, will it be permanently  
17 chain-link fenced and locked off --

18 A. MR. MENNINGER: At the control building? Yes,  
19 yes.

20 Q. All right. What is a fracking exclusion zone?

21 A. MR. MENNINGER: A fracking exclusion zone, as I  
22 understand it, is an area around a particular location  
23 for which fracking is not allowed, is my understanding.

24 Q. As the response to the proposed fracking exclusion zone  
25 only addresses the ground accelerations at the dam site

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1 and does not appear to address issues surrounding  
2 settlement, should fracking occur close to the dam, or  
3 allow for a settlement beneath the structure, can you  
4 tell me, how do you intend to mitigate this risk? And  
5 this might be a question for Mr. Back, perhaps. I  
6 don't know.

7 But by all means, Mr. Menninger if you want to  
8 field it.

9 **A. MR. BACK:** Could you repeat that again,  
10 **first?**

11 **Q.** Sure. So as the response to the proposed fracking  
12 exclusion zone only addresses the ground accelerations  
13 at the dam site and does not appear to address issues  
14 surrounding settlement, should fracking occur close to  
15 the dam, or allow for a settlement beneath the  
16 structure, how do you intend to mitigate this risk?

17 **A. MR. BACK:** This is Dan Back. I believe the  
18 greatest risk to the facility would be the motion from  
19 fracking. I don't think in the formations here that we  
20 would have a significant risk of a fracking operation  
21 causing significant settlement.

22 Now, if there's resource extraction, if there's  
23 oil or something being removed, it may be a different  
24 situation. But the danger typically associated with  
25 fracking is the motion that comes from fracking-induced

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1 seismicity. That was evaluated in our seismic hazard  
2 analysis; that's what you alluded to in your earlier  
3 comment.

4 As far as settlement, I'm not aware that there  
5 would be any issue. If it was an area settlement, then  
6 everything would settle together, the dam, the  
7 reservoir, the channel.

8 As far as differential settlement, the  
9 monumentation that's supposed to be on the dam, would  
10 allows us in regular intervals to make measurements of  
11 that and establish if there's a differential settlement  
12 occurring at the site, and mitigation could be  
13 undertaken prior to the use of the facility.

14 Q. And Mr. Back, what is a fracking exclusion zone?

15 A. MR. BACK: That term was brought up. I would  
16 have to assume, like Mr. Menninger, that that would  
17 mean an area where fracking would not be permitted.

18 As far as I know, at this point in time, aside  
19 from the government-controlled property, there has not  
20 been a fracking ban instituted at this or on site.

21 Q. I'm sorry, I missed that, Mr. Back.

22 A. MR. BACK: As far as I know at this time,  
23 aside from the government-controlled property, there  
24 has not been a fracking ban instituted at the site.

25 I could go on to say, that, as far as we know at

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1           this time, there hasn't been any fracking that has  
2           occurred in the vicinity of the SR1. There is fracking  
3           in Alberta. It's a number of kilometres to the north  
4           and northwest where that has occurred.

5           Q. So where is the nearest -- do you know where the  
6           nearest resource extraction is to the project area?

7           A. MR. BACK:                   I do not. I know that there was  
8           some gas extraction not too far away. I think oil  
9           extraction is probably a little farther north, but I  
10          couldn't give you specifics.

11          Q. Mr. Menninger, this is probably a question for you or  
12          for Mr. Wood.

13                 Could you please provide clarification and  
14                 justification for the constant diversion inlet rate of  
15                 480 cubic metres per second during routing of the  
16                 probable maximum flood, as this appears to be  
17                 inconsistent with inlet gates being fully open and  
18                 assumes that the gates can be partially closed, which  
19                 impacts the sizing of the emergency spillway.

20                 So maybe, I might just -- maybe I should rephrase  
21                 this question, you know, more as a -- perhaps as a  
22                 proposition, and you may dispute various elements of  
23                 it, so I'll just run it by you again, and that...can  
24                 you provide clarification and justification for the  
25                 constant diversion inlet rate of 480 cubic metres per

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1 second during the routing of the PMF as this appears to  
2 be inconsistent with inlet gates being fully open and  
3 assumes that the gates can be partially closed, which  
4 impacts the sizing of the emergency spillway?

5 **A. MR. MENNINGER:** Sure. So the -- in fact, what  
6 we're showing is that the gates can't be closed. We're  
7 actually increasing --

8 So the hydrograph that's shown on, I guess we can  
9 reference it for the Board on Exhibit 159 on page 177  
10 of the PDF, is a scenario where, as I mentioned, the  
11 probable maximum flood and we have a malfunction.

12 And so in this scenario, what we're demonstrating  
13 is an initial diversion of flow into the reservoir up  
14 until a point where we lose control of the inflow.

15 So it does look a little bit strange that the  
16 hydrograph comes -- the hydrograph rises and then  
17 flattens at 480 for, I guess, four hours or so and then  
18 spikes back up as inflow continues into the reservoir.

19 What that's actually showing is that the service  
20 spillway gates are in control of the flow into the  
21 channel up until the point that the water continues to  
22 rise faster. It's not showing that the gates are  
23 closed and throttling flow and or partially closed and  
24 throttling flow; it's that we're actually operating the  
25 service spillway gates to push more flow in. It's



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1 almost like we're pushing, we're pushing, we're  
2 pushing. Oh, no, we can't stop it scenario, not we're  
3 throttling it and then the opposite scenario.

4 So this is in fact an operation scenario. In a  
5 very large flood, and if you wanted to capture the peak  
6 of a very large flood, you would not want to fill your  
7 reservoir before the peak got there.

8 So we are using a lower volume because we thought  
9 that that was a realistic scenario for operations  
10 during that period of time, and after that point -- and  
11 I will continue to say that this is an incredibly  
12 conservative scenario. This involves the probable  
13 maximum flood entering our reservoir without any  
14 intervention to prevent flow. We will not be -- we are  
15 not assuming the gates are closed one bit. Not that  
16 they stopped halfway closed, that they never even  
17 lowered and that the full uncontrolled piece goes  
18 through.

19 So just to clarify, I mean this is a scenario  
20 where we have an extra spillway and designed to pass  
21 the 10-to-the-minus-6 event, and we're assuming that  
22 there is zero intervention for a period of three days.

23 So -- but that's the seriousness that we're taking  
24 the extreme hazard structure of this facility.

25 Q. Now, on Monday, you mentioned about the operator being

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1           able to vary in that rate between 480 and 600 cubic  
2           metres per second, and we've discussed, you know, that,  
3           I think to some degree. And you mentioned, basically,  
4           there's ability, then, to essentially capture the peak  
5           of the hydrograph? Did I hear you correctly?

6           **A. MR. MENNINGER:           I said that is a strategy that**  
7           **could be employed during operations.**

8           **Q.** And how do you know when the peak of the hydrograph is  
9           going to come?

10          **A. MR. MENNINGER:           You don't. You don't, Mr. Secord.**  
11          **And Mr. Chairman, you don't know for sure when the peak**  
12          **of the hydrograph is going to come. You will have some**  
13          **information coming from upstream. We will have an**  
14          **understanding of rainfall in the areas and things of**  
15          **that nature. So there is, you know -- I mean there's**  
16          **potential, there is not.**

17                    **But in a scenario where we do have gauges up**  
18                    **stream, likely multiple flow gauges telling us what's**  
19                    **coming, there is some scenarios where you could foresee**  
20                    **it. But I can't say that you will always know what the**  
21                    **peak is.**

22                    **But that also tells -- that also supplies you with**  
23                    **the simplicity of the operations. We have a target to**  
24                    **operate between 480 and 600 cubic metres per second,**  
25                    **and that is sufficient to mitigate billions of damage**

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1 in Calgary for a flood of up to the 2013 flood.

2 So that's...

3 Q. Could you please indicate the means and methods for  
4 cleaning up the debris deflector and contingencies for  
5 debris accumulation during a significant flood event  
6 should this occur? And I don't know, Mr. Menninger,  
7 whether you were there during Barbara Teghtmeyer's  
8 presentation, but she showed a picture of the inside of  
9 her house with this huge log in there which she said,  
10 once it got in there and the water came in there, she  
11 said it was like a washing machine inside her  
12 residence.

13 So I'm just wondering, you know, it looks like the  
14 stuff that could be coming at this debris deflector  
15 could be, you know, significant in size and the  
16 potential to damage.

17 So if you could maybe speak to that question.

18 A. MR. MENNINGER: Sure. I think, to your point and  
19 for the benefit of the Board, debris is a significant  
20 concern that the design team has had in place and in  
21 mind from the outset of this project, starting with the  
22 diversion structure. The changes that we made from the  
23 concept design that had overhead radial gates in place  
24 within the structure and replacing them with crest  
25 gates that allow for debris to flow overtop of them is

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1 a key -- was one of the initial first decision points  
2 that we made as part of the project team in order to  
3 mitigate for debris.

4 So the debris -- so those were tested and the  
5 reason -- and part of the reason how that was arrived  
6 at was that we did test debris within the physical  
7 model.

8 So we actually crafted scaled trees and put them  
9 within the model to demonstrate their effect. The  
10 trees also had roots. We put real root balls on the  
11 ends of the trees to simulate that effect.

12 So the intent there was to make sure how do these  
13 gates operate with debris and can we pass debris  
14 overtop of them.

15 So one of our mitigation strategies is that, is to  
16 promote for debris to continue downstream to stay in  
17 the Elbow River and pass through our structure,  
18 recognizing that during some of these bigger flow  
19 events, when we're going to have more flow going --  
20 potentially more flow going to the diversion than going  
21 downstream, we weren't going to be able to keep debris  
22 out of the reservoir and away from our diversion inlet.

23 So we proposed this debris deflection barrier.  
24 That's now incorporated within the design. That was  
25 also tested within in the physical model. So --

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1           But in terms of the design elements of it, that  
2 debris deflector has been designed to consider impact  
3 loads from very large debris. And beyond -- so the  
4 impact is one thing.

5           So we looked at -- and Matt had a key role in  
6 this. We did look at impact loads from trees and from  
7 large trees, right? But we also looked at an impact  
8 load from a Ford F250 coming down the river and hitting  
9 it. So we looked at the velocities going into it and  
10 their -- and their contact with those structural  
11 members.

12           Probably the more structural one that we looked  
13 at, though, is we considered the effect of like drag  
14 force pooling a large mat of debris up against that  
15 deflector and designed it accordingly.

16           It is long; I think it's been mentioned here that  
17 it's 170 metres in length. So -- and by contrast the  
18 diversion inlet gates are only 40 metres total.

19           So if you consider that, the -- in terms of  
20 blockage, that structure has a ton of flow area.

21           So getting flow, what we've shown through our  
22 hydraulic calculations is that getting flow through  
23 that structure will not be an issue during these design  
24 events.

25           And then finally to your point, again, you know,

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1 we designed it to promote where possible debris to stay  
2 in the river and continue downstream, but in this  
3 scenario, that if -- when debris gets within the  
4 structure or wither up against it or within the  
5 channel, you know, there is provisions for cleanup.  
6 And maybe I can have Matt Wood describe how we would  
7 propose to perform some of those activities.

8 Q. Just before we get to cleanup -- and, Mr. Wood, I  
9 definitely want hear from this -- you said you modelled  
10 a Ford F150 coming down the river; did you model a  
11 house coming down the Elbow River?

12 A. MR. WOOD: Yes. Thank you, Mr. Chairman and  
13 Mr. Secord, that is a good question. It's one that we  
14 have actually received as well. I will correct  
15 Mr. Menninger. It was an F350, a diesel, a 1-tonne  
16 diesel, given that this is Alberta.

17 But, you know, when you have the house, the house  
18 itself -- and I know there's a very famous video from  
19 one of the residents in Bragg Creek who lost their  
20 house, unfortunately, to the flood, where the house  
21 comes down and slams into the bridge at Bragg Creek.

22 You see it break up, right, and so -- so the  
23 impact from that is maybe not the same as a hard,  
24 dense, heavy object, and that's where the truck came  
25 in.

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1           But, to that point, when things like, say, a  
2 house -- you know, we even talked about tarpaulins  
3 could have the same effect, right? Like, anything  
4 that's a blockage of the structure -- a piece of  
5 sheathing from a house, a picnic table, all those  
6 things that have blockage faces could accumulate on  
7 that; and to Mr. Menninger's point, the structure has  
8 been done -- designed with a lot of very -- if you  
9 think of the lint screen in your dryer, right, it gets  
10 accumulation on it, so you make that screen bigger so  
11 that the air, in this case, the water can still move  
12 through it.

13 Q. And, again, before we get to you, Mr. Wood, on the  
14 clean-up portion, do I understand it, Mr. Menninger,  
15 then, that, in this sort of football field or half  
16 football field model that you created, you  
17 actually -- did you actually create these -- the  
18 deflector barrier and then, you know, trees with root  
19 balls on them, and then essentially created a channel  
20 which would then had a flow velocity of, let's say,  
21 1600 cubic metres per second, and then -- are you  
22 actually testing, you know, building a model to  
23 actually see what happens on a small scale? Did I  
24 understand that correctly?

25 A. MR. MENNINGER:           Yeah. Yes. We tested it up to

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1           the design flood event with debris, and it was  
2           basically a three-dimensional model of the Elbow River.  
3           We even embedded sticks into it to represent the forest  
4           upstream of the floodplain berm. All those features  
5           are incorporated in it.

6        Q.   And to be clear, we're not talking about a computer  
7           model, we're talking actually a physical model where  
8           you get water, you generate a certain flow velocity,  
9           and then you observe what occurs in the model itself.  
10       Do I have that right?

11       A.   **MR. MENNINGER:**           That's correct. And the details  
12       of that are in Exhibit 174.

13       Q.   Right. All right. And so I had asked, then, about the  
14       means and methods for cleaning up debris accumulation  
15       during a significant flood event should this occur.

16                So in a scenario where you have -- somebody's, you  
17       know, a tarpaulin, you know, covering, you know,  
18       a -- you know, a 100 or 200 round bales or, you know,  
19       something like that hitting the debris deflector, what  
20       are then the contingencies for getting that removed  
21       from the deflector?

22       A.   **MR. WOOD:**                So, Mr. Chairman, if I may, just  
23       maybe a correction.

24                I'm not too sure if you intended this, Mr. Secord,  
25       but the cleanup wouldn't be necessarily during flood



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1 operations. It would be in post-flood operations when  
2 it is safe to get in there to remove it.

3 As Mr. Menninger explained and designed, the  
4 debris deflection barrier is intended to accumulate  
5 sediment and it's been designed to accumulate debris,  
6 and it's able to do that. So you wouldn't go in and  
7 actively remove it during a flood.

8 But after a flood, once those service spillway --  
9 I'll be very quick -- once the service spillway gates  
10 drop, that head pond that Mr. Menninger mentioned,  
11 would lower and debris removal from the barrier can be  
12 done in the dry.

13 Q. And so I guess the -- I think you've that answered  
14 this, Mr. Wood -- or I guess the answer I assume is,  
15 the impact to the intake diversion capacity during such  
16 debris blockages, would I be fair in sort of inferring,  
17 then, that you don't expect there to be an impact on  
18 the intake diversion capacity? Maybe that's more for  
19 you, Mr. Menninger? But either of you.

20 A. MR. MENNINGER: Sure. This is John Menninger.

21 There will be some effect, right, but it will not  
22 affect our ability to divert and meet the thresholds  
23 for the 2013 flood based upon our simulations, and we  
24 looked at a significant debris of blockage.

25 But like I said, it is four times the width of the

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1 diversion inlet.

2 Q. Can you please indicate the conditions under which  
3 Springbank Road will require closure during the  
4 operation of the SR1 reservoir?

5 A. MR. MENNINGER: So it would be at the point where  
6 the water is within a certain distance of the pavement.  
7 That elevation, I believe is about -- you know, based  
8 on Alberta Transportation engineers' recommendations  
9 is, you know, within a metre.

10 I think there are other safety considerations that  
11 probably need to be in place for confirmation on that.  
12 And during diversion, I would expect that, you know,  
13 we'd have to consider those elements.

14 So I think some of that's part of the flood action  
15 plan that will have to be put in place, but, you  
16 know...

17 A. MR. WOOD: If I may contribute to that,  
18 Mr. Chairman, Springbank Road doesn't overtop until a  
19 50-year event. That's been indicated throughout the  
20 length of the project.

21 I believe what Mr. Menninger is referring to is  
22 that even though it may overtop at a 50-year event,  
23 there would be monitoring of it, and what he's  
24 referring to is the substrate underneath. You may not  
25 be able to drive heavy loads on it and stuff once

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1           you're at that point just below that pavement.

2                       So it may be just before the reservoir is full  
3           with a 50-year event.

4       Q.   And who will be responsible for the closure of  
5       Springbank Road under these conditions?

6       A.   **MR. MENNINGER:**        I believe that's -- be still --  
7       that would be determined as part of the operations plan  
8       in conjunction with Alberta Environment and Parks and  
9       Rocky View County.

10      Q.   Okay. And so in terms of providing resources for the  
11      closure of these roads under these conditions, again,  
12      that would be something to be determined in the future?

13      A.   **MR. MENNINGER:**        That's correct.

14      MR. SECORD:                    Okay. Mr. Chair, I'd like to, if  
15      I could turn to Exhibit 339, but if it's okay with you,  
16      could we take like just a five-minute stretch break for  
17      a minute or two?

18      THE CHAIR:                     Well, we could. I mean I'd like  
19      to wrap up probably around 5:00 today if we could, but  
20      we can go, I mean, a few minutes past is fine.

21                So if we want to just take five minutes for --

22      MR. SECORD:                    Just a couple -- maybe just come  
23      back in about three minutes?

24      THE CHAIR:                     Three minutes is fine, yeah.

25      MR. SECORD:                    Thank you.

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1 THE CHAIR: And we'll close shortly after 5.

2 (ADJOURNMENT)

3 THE CHAIR: Okay.

4 Q. MR. SECORD: If we could go to PDF page 7.

5 And, Mr. Menninger, are you familiar with the Alberta

6 Dam and Canal Safety Directive?

7 A. MR. MENNINGER: Yes, I am.

8 Q. And you can confirm this document has an effective date

9 of December 11, 2018, and would apply to SR1?

10 A. MR. MENNINGER: That's correct.

11 Q. And if we could turn to that section 2. -- Section 2.1

12 at the bottom of that page, it says, "Information

13 Required for a New Dam or Canal": (as read)

14 "1) When applying for an authorization

15 to construct a new dam or canal, a

16 dam/canal owner must submit to the

17 director, in writing, all of the

18 following information."

19 Can you advise whether all of the information set out in

20 Section 2.1 has been filed with the NRCB?

21 A. MR. MENNINGER: Sure. I'd be happy to explain

22 that. So the answer is not everything has been filed

23 with the NRCB or with the Dam Safety Review Board or

24 reviewers at this time.

25 What the -- in our discussions with the director

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1 of dam safety of Alberta is that this process is, while  
2 not laid out explicitly in the directive is a -- what's  
3 a term I'm looking for -- it is kind of a stepped or  
4 phased process for submission of an application.

5 And I'll give you a reason why.

6 If I could reference you to section  
7 C -- Section C(vi) on page 9, it also requires a  
8 construction completion report. We can't complete  
9 construction without authorization, and so you can't  
10 submit the full requirements. That's just one example.

11 So there's multiple expectations here from the  
12 reviewers that you first submit your hazard  
13 classification and your preliminary design information.

14 That information is then provided to the  
15 agency -- to the department and they review it, and  
16 they provide comments and feedback about those  
17 elements.

18 Those components -- and they will advise if they  
19 need additional information -- are basically the  
20 elements in order to get approval for construction, if  
21 you will.

22 And then the next stage gate that you're at is  
23 that, during construction, you would then develop that  
24 operation, maintenance and surveillance manual, your  
25 emergency management plans, response plans, all these

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Cross-examined by Mr. Secord

1 other elements that we're talking about.

2 And there's a reason why.

3 So your operations manual for a dam incorporates  
4 all the elements associated that you have to do to  
5 operate those mechanical and instrumentation  
6 components, where when you do gate procurement and  
7 design for a project like this, you don't specify one  
8 manufacturer or one supplier. You put it out for bid  
9 with requirements for performance specifications. And  
10 then the contractor goes and procures something that  
11 meets those requirements and then it's reviewed and  
12 approved by the government.

13 So we can't write an operations manual until we  
14 know what specific equipment needs to be operated. So  
15 that's just one example. But then the construction  
16 completion report is another.

17 So, basically, it's a staged process to get  
18 through the dam safety review process with them, and so  
19 we are in that process.

20 They have been provided the hazard classifications  
21 and the majority of information that's in those first  
22 sections of this element, including site  
23 characterization and analysis, and things like that  
24 nature.

25 Q. So in terms of the regulatory process, AT applies to

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Cross-examined by Mr. Secord

1 the NRCB for authorization, then, to build SR1;  
2 correct? You're looking for an approval --

3 **A. MR. MENNINGER:** I guess -- maybe someone else on  
4 the panel would be better to answer questions about  
5 authorizations of the NRCB.

6 **Q.** Mr. Hebert?

7 **A. MR. HEBERT:** Mr. Chairman, Mr. Speller will  
8 provide the response on this matter.

9 **A. MR. SPELLER:** So, Mr. Chairman, we're applying  
10 through this process of the NRCB for permission to  
11 proceed with the project.

12 The authorization to build the project and the  
13 acceptance from the dam safety reviewers on the design  
14 of the project come through Alberta Environment and  
15 Parks and their approvals teams.

16 **Q.** So you get, Mr. Speller -- you're hoping to get an  
17 approval from the NRCB, and then at some point in the  
18 future, then you would also be getting an authorization  
19 to construct as well from the director?

20 **A. MR. SPELLER:** From the director of -- a director  
21 at AEP, yes.

22 **Q.** Okay. And then if we look at page 9, for instance,  
23 that Mr. Menninger referred to, he refers to, just  
24 above that, it says that you're to submit to the  
25 director V(E) testing and commissioning.

## ALBERTA TRANSPORTATION TOPIC #3 PANEL

Cross-examined by Mr. Secord

1           What is involved in testing and commissioning that  
2           the director wants to see?

3       **A. MR. MENNINGER:**        Sure. So that would be, as part  
4       of the design, we're developing requirements for the  
5       performance of a number of mechanical and, like I said,  
6       electrical and other instrumentation components,  
7       structural components, that will have to be proved out  
8       in, you know, prior to acceptance by the government and  
9       handover.

10           So, in this scenario, if you're talking about a  
11          gate system, the commissioning of that gate system  
12          would consist of the operation of those gates through  
13          the full cycle as an expectation, as part of the  
14          commissioning process.

15       **Q.** Now, Mr. Menninger, my clients would like the  
16       opportunity to review this information as part of the  
17       approval process. It looks to me like, obviously, you  
18       know, we're not going to have testing and commissioning  
19       happening before the NRCB decision, but would AT accept  
20       as a condition of an NRCB approval, a requirement that  
21       the testing and commissioning details would be shared  
22       with the SCLG?

23           That might be a question for Mr. Hebert perhaps.

24       **A. MR. MENNINGER:**        Mr. Chairman, if we could caucus  
25       quickly on this if you don't mind.



1 THE CHAIR: I'm just looking for my mute  
2 button. Yes, please.

3 Mr. Secord, it's on 5:00, so, you know, is there a  
4 logical question or two and then -- for a break, and  
5 then we can continue on tomorrow morning.

6 MR. SECORD: Maybe what we'll do is, we'll from  
7 them when we come back, and we can break now and resume  
8 at 8:30 tomorrow morning, sir?

9 THE CHAIR: Yes.

10 MR. SECORD: Okay. Thank you.

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12 PROCEEDINGS ADJOURNED TO MARCH 26, 2021 AT 8:30 A.M.

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1 Certificate of Transcript

2

3 We, the undersigned, hereby certify that the foregoing  
4 pages 866 to 1115 are a complete and accurate transcript of  
5 the proceedings taken down by us in shorthand and  
6 transcribed from our shorthand notes to the best of our  
7 skill and ability.

8 Dated at the City of Calgary, Province of Alberta, on  
9 March 25, 2021.

10

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12

"Lorelee Vespa"

13

Lorelee Vespa, CSR(A) RPR CRR  
Official Court Reporter

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"Deanna DiPaolo"

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Deanna DiPaolo, CSR(A)

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Official Court Reporter

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