



**“When You Talk - We Listen!”**



MACKENZIE VALLEY LAND  
AND WATER BOARD

TECHNICAL SESSION

RE:

INAC - CARD TUNDRA TYPE A RENEWAL

Facilitator:

Rebecca Chouinard

HELD AT:

Yellowknife, NT

June 23, 2016

## APPEARANCES

1  
2  
3 Rebecca Chouinard ) MVLWB Staff  
4 Jen Potten )  
5 Shannon Allerston )  
6 Heather Scott )  
7 Tyree Mullaney )  
8  
9 Rick Walbourne ) GNWT-ENR  
10  
11 Astrid Salomoh ) INAC - CARD  
12 Joel Gowman )  
13 Murray Somers )  
14  
15 Georgina Williston ) DFO  
16 Morag MacPherson (by phone) )  
17  
18 Shin Shiga ) NSMA  
19  
20  
21  
22  
23  
24  
25

	TABLE OF CONTENTS	
		PAGE NO.
1		
2		
3		
4	Presentation by INAC-CARD	11
5	Question Period	39
6		
7	Presentation by INAC-CARD re Mill Pond Drawdown	55
8	Question Period	64
9		
10	Presentation by INAC-CARD re Water Quality	77
11	Question Period	86
12		
13	Presentation by INAC-CARD re re-submission of	
14	management plans and reports	99
15	Question Period	105
16		
17	Presentation by INAC-CARD re Long-term monitoring	
18	and triggers	140
19	Question Period	142
20		
21	Certificate of Transcript	182
22		
23		
24		
25		

1	LIST OF INFORMATION REQUESTS		
2	NO.	DESCRIPTION	PAGE NO.
3	1	INAC CARD, based on all of the current and historical water quality data downstream of the water treatment facility, including but not limited to information collected for the human health and ecological risk assessment baseline data and annual reports to provide evidence and rationale that supports INAC-CARD's recommendation to maintain the discharge criteria	
13		identified in part B, item 6, of the	
14		existing water licence, MV2009L80008.46	
15	2	SNP for decommissioning. Provide surveillance network program stations with associated effluent quality criteria, if applicable, with supporting evidence and rationale to ensure ongoing protection of the environment following decommissioning, including testing requirements, sampling frequencies and parameters and activation triggers.	90
25			

LIST OF INFORMATION REQUESTS (cont'd)		
No.	DESCRIPTION	PAGE NO.
1		
2		
3	3	
4	Sewage discharge. INAC-CARD to	
5	recommend surveillance network program	
6	station locations, testing	
7	requirements, sampling frequencies and	
8	parameters, activation triggers and	
9	discharge criteria for sewage discharge	
10	from the sewage treatment facility, if	
11	needed, as a contingency measure.	97
12	4	
13	INAC CARD to list what reports and	
14	plans and studies and stuff you have	
15	planned for upcoming years.	154
16	5	
17	Requesting that both GNWT and INAC	
18	respond in writing officially stating	
19	that there is some discussions going on	
20	behind the scenes and collaboration	
21	behind the scenes and the federal	
22	licence, federal minister, federal	
23	inspectors is supported by both	
24	parties.	165
25	6	
	Provide a list of all the monitoring	
	stations, what their purpose is, and	
	triggers for getting rid of them	174

1 --- Upon commencing 9:00 a.m.

2

3 THE FACILITATOR: All right, everybody  
4 I think we are ready to get started. Good morning and  
5 thank you for coming. This is the INAC - CARD Tundra  
6 Type A Renewal technical session. So if you're in the  
7 wrong meeting now's your chance to escape.

8 My name is Rebecca Chouinard. I am the  
9 regulatory and technical director of the Mackenzie  
10 Valley Land and Water Board and I will be facilitating  
11 the session today.

12 I just want to remind everybody that  
13 this session is being recorded and, for that reason,  
14 if you could please state your name before you talk,  
15 the organization that you work with and please talk  
16 slowly. And I have this sign to wave around to remind  
17 you if you should forget.

18 Once the -- once the transcripts are  
19 recorded and reviewed we will be posting them on our  
20 public registry for future reference.

21 I'll quickly go over the emergency  
22 exits. They're located right outside of the door,  
23 follow the lighted signs if need be and you'll go down  
24 into the back alley and there's a designated muster  
25 point there.

1                   Washrooms, keys are located, they're  
2 hanging on the wall as you go out the door. There are  
3 three (3) washrooms out the door and the keys open any  
4 of the washrooms.

5                   We'll take breaks for refreshments. We  
6 have snacks and coffee coming. The first break at  
7 10:30 roughly and they'll be one in the afternoon if  
8 we need that as well but note that lunch will not be  
9 provided.

10                  There are copies of the agenda and the  
11 comments summary table located at the front of the --  
12 at the side of the room and there are agendas also  
13 around the room if you don't have one of those.

14                  There's also a sign-up sheet that's  
15 going around the room so if you could please make sure  
16 you sign the sign-up sheet before you leave today.

17                  And with that we'll get right into the  
18 session here. The purpose of the session is just to  
19 try and resolve any issues that exist with the project  
20 prior to going into the public hearing. We hope to be  
21 as informal as possible and hope to resolve as many  
22 issues as we can. But just a reminder that there will  
23 be opportunities further down in the process to put  
24 additional questions forward or ask questions through  
25 the public hearing process.

1                   So some quick background on the file.

2   The application was deemed complete and sent for a  
3   review on May 18th, 2016. On June 6th comments were  
4   due on the application from reviewers. On June 10th  
5   proponent's responses were received and that brings us  
6   to today June 23rd, this technical session.

7                   Some important dates that are coming  
8   up. We hope to have any Information Requests recorded  
9   and communicated today and the responses to these  
10   Information Requests will be due on June 28th.

11                   The pre-hearing conference is scheduled  
12   for June 30th. We hope to have that agenda sent  
13   around later today or tomorrow at the latest.

14                   Written interventions are due July 5th.  
15   The proponent's responses to interventions are due  
16   July 8th. The Intervenor public hearing presentations  
17   are due July 11th. The Proponent's presentations for  
18   the public hearing are due July 14th. And the public  
19   hearing is currently scheduled for July 28th.

20                   So the agenda for today is broken into  
21   the main topics from reviewers' comments from the --  
22   the first review. We've attempted to capture the  
23   number -- the associated number with a review comment  
24   for each topic, and we will be cross-referencing with  
25   the actual review table from the online review system.



1                   There's also -- there will be an  
2 opportunity to talk about any of the -- any additional  
3 questions, concerns, issues under each section. And  
4 again, at the end, we have a catch-all 'Other'  
5 category for anything else that people want to bring  
6 up.

7                   The Proponent, INAC-CARD, will begin  
8 first with an overview presentation of their  
9 application, and have topical presentations to lead us  
10 into each section of the agenda. And we will get to  
11 that in just one (1) moment.

12                   Before we turn the floor over to the  
13 INAC-CARD folks, I would like to do a quick roundtable  
14 of introductions, starting perhaps on this side of the  
15 room.

16                   MS. GEORGINA WILLISTON:   Hi. Good  
17 morning. It's Georgina Williston, with Fisheries and  
18 Oceans Canada. My understanding is there's conference  
19 call capabilities also, so Morag McPherson should be  
20 on the phone. Thank you.

21                   MS. ASTRID SALOMOH:   Hi, I'm Astrid  
22 Salomoh. I'm assistant -- admin assistant on -- with  
23 INAC.

24                   MS. JEN POTTEN:   Hi. Jen Potten, with  
25 the Mackenzie Valley Land and Water Board, Board

1 staff.

2 MS. SHANNON ALLERSTON: And I'm also  
3 Board staff with the Mackenzie Valley Land and Water  
4 Board, Shannon Allerston.

5 MS. HEATHER SCOTT: I'm Heather Scott,  
6 Board staff, with the Mackenzie Valley Land and Water  
7 Board.

8 THE FACILITATOR: Rebecca Chouinard,  
9 with the Mackenzie Valley Land and Water Board.

10 MS. TYREE MULLANEY: Tyree Mullaney,  
11 Mackenzie Valley Land and Water Board staff.

12 MR. RICK WALBOURNE: Rick Walbourne,  
13 ENR, Water Resources Division.

14 MR. MURRAY SOMERS: Murray Somers,  
15 with INAC-CARD, sitting in the Proponent's seat today.

16 MR. JOEL GOWMAN: Joel Gowman. I'm  
17 the project manager for the Tundra Mine Project with  
18 INAC-CARD.

19 THE FACILITATOR: Okay. And we'll  
20 turn it over to the phone.

21

22 (BRIEF PAUSE)

23

24 THE FACILITATOR: It's Rebecca here.  
25 Okay. Thank you, everybody. That captures -- sorry,

1 about that. There were -- there was a technical  
2 delay. Morag, do you mind introducing yourself once  
3 again?

4 MS. MORAG MCPHERSON (by phone):  
5 (SOUND TECHNICAL DIFFICULTIES).

6 THE FACILITATOR: Okay. Perfect.  
7 It's Rebecca here again. That's everybody in the room  
8 and everybody online. So with that, I will turn the  
9 floor over to Murray and Joel for their presentation.

10

11 PRESENTATION BY INAC-CARD:

12 MR. JOEL GOWMAN: Joel Gowman, with  
13 INAC. I just wanted to thank the Board for the  
14 opportunity to provide a bit of a summary of -- of  
15 what we've done to date and what we're planning on --  
16 on accomplishing under this renewed authorization, and  
17 look forward to any of your questions as we go.

18 So Murray's put together a fairly  
19 comprehensive presentation, and we look forward to  
20 your thoughts. So thanks for the opportunity.

21 MR. MURRAY SOMERS: Murray Somers,  
22 with INAC. Yeah, I'll walk everybody through the  
23 presentation here, and -- and you're going to see  
24 probably some content within the initial kind of  
25 overview that will be addressed later on in the

1 individual topics that we've set out in the agenda  
2 already.

3                   But -- but just know that even though  
4 I'm -- I'm speaking to them a little bit, or some of  
5 them anyway, in the -- in the general overview, that  
6 there will be a dedicated section to them later on,  
7 okay?

8                   Great. And do I have to stay here for  
9 the microphone?

10                   MR. JOEL GOWMAN: You can have this  
11 one if you want.

12                   MR. MURRAY SOMERS: Okay. All right.  
13 Thank you. All right. So this -- a lot of this is  
14 not going to be new information for a lot of you.  
15 We've already had the application in, and this is a  
16 continuation of a project that's been going on since  
17 2010. And it's been permitted under a water licence  
18 and land use permit through the Mackenzie Valley Land  
19 and Water Board already.

20                   So, essentially, what has happened is  
21 our operations require a couple more years to finish  
22 remediation of the Tundra Mine site, but our current  
23 land use permit and water licence are expiring in  
24 December of this year. So -- so this application is  
25 to continue our work and finalize the program and

1 enter into an adaptive management and monitoring  
2 phase.

3                   So continuation of the Tundra Mine  
4 Remediation Project. This quick outline is going to  
5 go over first, just an introduction for anybody who  
6 might not be terrifically familiar with the Tundra  
7 Mine Project.

8                   I know quite a few of you have dealt  
9 with either the original application or -- or the  
10 amendment application back in 2013, but I'll go  
11 through it pretty -- pretty briefly, just so everybody  
12 is on the same page. Overview of what the Remediation  
13 Project is, particularly Phase II.

14                   We'll go over our time line schedule  
15 for events. I won't deal with what's already  
16 happened. I'm just going to talk about what's  
17 happening now and into the future. And -- yeah. So  
18 overview of what's remaining and the adaptive  
19 management overview -- overview as well.

20                   So here's where we're located. We're  
21 240 kilometres northeast of Yellowknife. It's about  
22 an hour flight to get there, so not terribly far out  
23 from -- from us.

24                   A little bit of history. So it was an  
25 underground gold mine, first staked in '45, had two

1 (2) stints of operation in '64 to '68, and then again  
2 in 1983 to 1987.

3                   And in that second period there, the --  
4 the workings weren't actually underground at Tundra.  
5 They were an adjacent mine called Salmita Mine, and  
6 the ore was brought over to the -- the processing  
7 plant here. And so all the tailings from the adjacent  
8 mine were actually deposited in those lakes that you  
9 see there in the background, Upper Pond and Lower  
10 Pond.

11                   So in that photograph there, that is  
12 pretty much at the very infancy of Tundra Mine because  
13 at the end, those ponds here were totally filled with  
14 tailings, and the bulk of that pond in the background,  
15 the Lower Pond, were also filled with tailings.

16                   It was purchased in 1992 by Royal Oaks,  
17 and they went into receivership in 1999. At that  
18 time, the site became the responsibility of the  
19 federal government or the Crown.

20                   Here's what the site layout looks like  
21 from the air. At the north end there's the air strip,  
22 and about a 5-kilometre road down to the mill area  
23 which is where the camp is now. That is the Upper  
24 Pond I just showed you that was filled with tailings,  
25 and Lower Pond as well. So combined, those made

1 essentially the -- the historic tailings containment  
2 area, and -- and it was formerly Russell Lake.

3 Any questions on that? Okay.

4 So Phase II, over to you. Contaminants  
5 of concern when the assessment was done showed up to  
6 be arsenic-rich tailings, about 290,000 cubic metres.  
7 It was originally thought it was less, but once  
8 remediation started, we found a bit more, and that's  
9 the more accurate number there.

10 We had a pretty vast amount of arsenic-  
11 impacted tailings -- or tailings water, sorry, about  
12 1.2 million cubic metres. And just to give you a  
13 sense of -- of how much that was, there'll be a  
14 photograph coming up showing you what that was --  
15 looked like at its peak.

16 And I think, at its very maximum, they  
17 were about 7 centimetres -- 7 to 10 centimetres or so  
18 from breaching the -- the containment dams at that  
19 point in time when we took over.

20 We have potentially acid generating  
21 (PAG) rock on site, about 135,000 cub -- cubic metres.  
22 Again, potentially. There was none confirmed, but --  
23 but there was some oxidation and what-not signs  
24 visible. So it was all -- all essentially considered  
25 potentially acid generating.

1                   And we also have PHC, hydrocarbon-  
2 contaminated soil and waste rock on the site. Some  
3 situations, they're mixed together, and some  
4 situations, they're -- they're separate. But -- but,  
5 yeah, we have both.

6                   And the technical objectives that came  
7 out of this -- of this assessment was to treat the PHC  
8 soils, consolidate the tailings and waste rock into  
9 the tailings containment area, construction of an  
10 engineered cap over the Tailings Containment Area, and  
11 treatment of the impacted water.

12                   So here we are with a photograph of the  
13 site. This is pre-remediation, even pre-Phase I  
14 remediation, because in Phase I, the mine  
15 infrastructure that you see right there, all the  
16 buildings and what-not, that was dealt with. So all  
17 the physical kind of hazards on site were dealt with  
18 during Phase I; that was back in 2009.

19                   And then -- and then after which we  
20 started Phase II, which was to deal with the technical  
21 components I just mentioned. But you can see in this  
22 photograph the state of the water back in the day.

23                   So this is Upper Pond, pretty much full  
24 to capacity, and this is considered Lower Pond. This  
25 is the former -- former Russell Lake.



1                   And you can kind of see in the  
2 photograph these lighter areas right there down this  
3 way. So that's actually the plume that came from the  
4 pipe that discharged the tailings slurry out into the  
5 ponds, right? So obviously the entire area that's  
6 submerged in water is impacted, the bulk of the  
7 tailings here at the south end.

8                   And we're going to be talking about it  
9 later, so I'll just -- I'll just mention it. That's  
10 Mill Pond right here, okay? It's just right there  
11 adjacent, and -- and that's the East Upper Dam.

12                   All right. So what have we done so far  
13 in Phase II? So under the current land use permit and  
14 water licence, we've actually treated and discharged a  
15 little bit over than 1.5 million cubic metres of the  
16 tailings-impacted water. That was successfully  
17 treated and discharged into Hambone Lake.

18                   That's greater, you'll notice, than the  
19 one point two (1.2). We had said it impacted water  
20 that was originally on site, and that's because every  
21 year when you treat water, you've also got your  
22 freshet inputs that come in, right, so you have to add  
23 -- add those amounts on as well.

24                   We have consolidated approximately  
25 112,000 cubic metres of waste rock into the tailings

1 containment area, so that's about 80 percent complete.  
2 I think it's actually about -- a little bit more than  
3 that complete, but -- but that was the last number  
4 that I had.

5                   And we've consolidated a vast majority  
6 of the tailings as well into the -- into the tailings  
7 containment area.

8                   We've constructed a fair portion of the  
9 cap overtop of both consolidated tailings and waste  
10 rock. We've got 60 percent of the tailings  
11 containment area lined, so with a bituminous liner.  
12 It's an impervious liner. And a portion of that has  
13 the earth cover complete. So about 25 percent of that  
14 has -- has it complete. So roughly, we're about a  
15 third complete, the -- the cap.

16                   West Lower Pond Borrow Area, that's the  
17 primary borrow area, or has been anyway so far in the  
18 operations. So it is hopefully at its pretty much max  
19 extent there right now.

20                   And we have stockpiled material on  
21 site, all graded to -- to what we need. So we've got  
22 our Type A materials, Type E/F materials, and that's  
23 our rip-rap and everything. They're all -- most of  
24 it's sitting there in stockpiles ready to go.

25                   So, yeah, as we say, mini -- minimal

1 future expansion is anticipated. It's possible we  
2 might need some, but numbers right now as they work  
3 out show that probably unlikely we'll need to expand  
4 that quarry any further.

5                   And site stabilization. So we have  
6 several berms that were constructed throughout the  
7 site to assist with the water management.  
8 Essentially, it's to minimize contact with the  
9 residual tailings that are still on site.

10                   So when our contractor left in 2014,  
11 there were partially constructed things. Like the cap  
12 was partially constructed, some areas were cleared of  
13 tailings but weren't separated from -- weren't --  
14 didn't have a distinct separation from the exposed  
15 tailings that were still on site, and what-not.

16                   So that's what these -- what I'm  
17 speaking about with these -- these berms that were  
18 constructed. They're -- they're there, and -- and  
19 I'll show you a -- some photographs of them and what-  
20 not of what they look like. And -- and they're  
21 working quite well to keep the, essentially, clean  
22 side clean and the dirty side dirty.

23                   And -- yeah. And we've successfully  
24 treated 16,000 cubic metres of PHC contaminated soil  
25 and waste rock. Any of that material that contained

1 waste rock was treated and disposed underneath the  
2 liner, or within the TCA.

3                   And the -- and we went through a  
4 process there with the Board last year or the year  
5 before where, if it was just soil, as long as it met  
6 the far shore criteria, then we can use it around  
7 site. But we haven't done that yet.

8                   Oh, and one (1) last thing about PHCs  
9 is we've actually treated all PHC, historic PHC  
10 contaminated material on the site. And anything else  
11 that's being done is just little bits that have been  
12 spilled from equipment and that sort of thing during  
13 the remediation process. Okay.

14                   So here is present state. This was  
15 taken in August 2014. It's changed a tiny bit from  
16 this. They -- they continued working past August  
17 obviously in 2014. They worked right into October,  
18 maybe even November -- no, October.

19                   And -- and so this here is the capped  
20 portion of the TCA, of the tailings containment area.  
21 It's actually extended a bit further than what's shown  
22 in the photograph here, but -- but other than that,  
23 this is pretty much the -- the site.

24                   So we had seen a photograph earlier  
25 that showed the tailings containment area. The two

1 (2) ponds were completely submerged in water. You can  
2 see here, this is the Lower Pond, this is Upper Pond,  
3 right? And this is obviously after successful water  
4 treatment.

5                   So the 1.2 million cubes of original  
6 tailings-impacted water has been dealt with. And --  
7 and afterwards, now we just deal with annual freshet  
8 inputs, right? So this would have been freshet water  
9 in here, and there would have been a bit probably  
10 gathered up in this end. But the water treatment  
11 plant had already been -- been done for this year, so  
12 that's why you're seeing very minimal amounts of  
13 water. So for most of the year now, it's pretty dry  
14 in there. Yeah. So that's that.

15                   And this is going to be the tailings  
16 containment area, the footprint of it when we're all  
17 done. And we just need to line this part and cap,  
18 finish capping the whole thing with the earth cover.

19                   Up here is the camp area, so that's  
20 where most of the original mine infrastructure was,  
21 was up in this area. But it's all gone now, Phase I,  
22 put into this landfill right there which is lined and  
23 capped. So that material was -- was dealt with a long  
24 time ago.

25                   Most of the waste rock and PHC

1 contaminated material was here. That's where the tank  
2 farms were and what-not, the historic tank farms, and  
3 where a lot of the mining infrastructure was.

4           So all the pads from the mining  
5 infrastructure were built essentially on waste-rock  
6 pads, so that's where that was. But all that area's  
7 cleared now. This area out here is all cleared of  
8 tailings, and we're -- all tailings there, a portion  
9 up here.

10           This is the East Lower Dam. There's  
11 that portion of it remaining that still has a bit of  
12 tailings left in it. And all of Upper Dam -- or Upper  
13 Pond, sorry, has been cleared of tailings as well.  
14 And there's just a bit remaining as well in the East  
15 Upper Dam.

16           So East Upper Dam, East Lower Dam are  
17 pretty much the only two (2) areas left that still  
18 have tailings that haven't been consolidated already  
19 into the TCA.

20           Yeah, this is a bit of a conceptual  
21 drawing before we did the work, but currently on site,  
22 to keep water off of the exposed tailings which are  
23 here -- these are not exposed because they're lined  
24 and covered right now, but there still is exposed  
25 tailings here -- we actually constructed a berm that

1 goes from this point, which is a low point, all the  
2 way around here -- that's what this north berm is --  
3 and then there's a channel running down this side.

4           So any water that flows in this way  
5 before it reaches the tailings will get diverted and  
6 into this cleared area. So there's no tailings up in  
7 this area, so it goes into the clean side, as we call  
8 it, or North Pond, okay?

9           Time line. So this is looking ahead  
10 pretty far, but pretty much to the end of the licence,  
11 or the renewed water -- water licence and land use  
12 permit. But currently, 2016, we're going through this  
13 process right now getting our -- our new land use  
14 permit and our renewed water licence.

15           And we're also going through the  
16 process with Public Works to contract -- to hire a new  
17 contractor to come in and finalize the work.

18           For those of you who don't know, since  
19 2014 -- well, so, yeah, 2015 and 2016, currently -- we  
20 have been in care and maintenance mode at the site.  
21 So there's been no Phase II remediation work being  
22 done just while we set up the new contract. And we  
23 made a few design tweaks which I'll -- I'll touch on  
24 later. But, yeah, that's taking a bit of time. And  
25 so this winter road will have a new contractor going

1 back in to finalize Phase II.

2                   2017, again, yeah, so contractor  
3 mobilization, so probably in February. Phase II  
4 remediation will require two (2) summers and will  
5 demob winter 2019. Might not be a complete  
6 demobilization for the adaptive management  
7 requirements afterwards, but -- but, yeah, there'll be  
8 a pretty substantial demob in 2019, which will pretty  
9 much mark the end of Phase II.

10                   And then we're going to -- and then in  
11 2019, we enter into the adaptive management phase,  
12 which is essentially short-term monitoring, five (5)  
13 year period, where we can kind of watch the site,  
14 continue to do the water quality monitoring, and make  
15 sure that our -- our remedial objectives are -- are  
16 being maintained by the structures and things that  
17 we've implemented on site. So we can, essentially,  
18 monitor geotechnically how stable the site is.

19                   And these boxes are -- are hollow  
20 simply because in 2023 we'll have to start getting  
21 regulatory approvals again, which will be probably a  
22 Type B water licence and land use permit, so we can  
23 conduct the long-term monitoring program which is  
24 slated to start in 2024.

25                   So this land use permit and water



1 licence that we're here to discuss today should expire  
2 in theory in seven (7) years, which will take us to  
3 2023, which is that red line. So long-term monitoring  
4 will actually fall under probably a Type B water  
5 licence and land use permit.

6 All right. So what's remaining? Yeah,  
7 like I said, we're going to have to mobilize a new  
8 contractor next year in -- in February. We need to  
9 finish the water treatment which is just again  
10 treating the annual inputs from freshet every year.

11 So last year was 56,000 cubic metres.  
12 This year I think we're running around a hundred  
13 thousand (100,000), just, you know, difference in  
14 precipitation between years.

15 And quarry development reclamation. So  
16 I'd said that West Lower Pond had most of the material  
17 already excavated sitting in stockpiles. But we're  
18 going to be changing our focus a little bit because we  
19 need more granular fill, more like gravelly type fill  
20 from the esker near the airstrip.

21 And that's to build that erosion-  
22 resistant cap on top of the TCA. So -- so luckily  
23 that doesn't need to be screened or it doesn't need to  
24 be -- or unlikely will be anyway. It doesn't need to  
25 be crushed or anything like that, so it's a lot faster

1 process.

2                   Dam removal. So we'll be removing  
3 what's remaining of East Lower Dam and removing the  
4 East Upper Dam. So that is where the Mill Pond  
5 drawdown comes in. It's for the removal of the East  
6 Upper Dam, so we'll talk about that a little bit  
7 later.

8                   Consolidation of the final 5 percent of  
9 tailings and waste rock. I think that number's a lot  
10 more correct. There's about 5 percent remaining  
11 because it's just that one (1) dam, East Upper Dam,  
12 and a little bit left of East Lower Dam. So -- in the  
13 other slide, I think it had said that we had about 20  
14 percent left, but it's probably closer to five (5)  
15 actually.

16                   We need to finish the cap on top of the  
17 TCA. We need to finalize the channels. So some of  
18 the channels on site that are going to convey water  
19 through the site at the end of the project, some of  
20 them are partially constructed, majority constructed,  
21 and -- and others are not. So we'll get into that a  
22 little bit later as well, so we need to finalize  
23 these.

24                   And then obviously site stabilization.  
25 We need to make sure we're going to leave the place in

1 a nice stable state.

2           Install our long-term monitoring  
3 equipment. That's primarily related to the cap so we  
4 can monitor how the cap is functioning. And -- and it  
5 might require some others, but that's primarily what  
6 I'm talking about there.

7           And -- and then finally, demobilization  
8 of some equipment, supplies, waste in 2019.

9           So moving from remediation phase to  
10 adaptive management phase, this was something that was  
11 brought up in the review comments originally from the  
12 application.

13           I've spoken to the Board a little bit  
14 about it already but, essentially, making that  
15 transition from the remediation phase into the  
16 adaptive management phase, we sort of have to go back  
17 and look at the remedial objectives. And once we've  
18 met those objectives then, essentially, we're -- we've  
19 -- we've ended Phase II remediation.

20           So we need to construct the TCA to  
21 contain the waste rock and tailings, treat all the  
22 water which is a Type A trigger, and we need to treat  
23 the PHC contaminated soil and waste rock on the site,  
24 triggers for all that activity being direct water use  
25 over 300 cubes a day for our operations and water

1 treatment.

2                   Now, operations under our current water  
3 licence is one fifty (150) -- 150 cubes a day, which  
4 is below a Type A trigger. We've actually applied for  
5 a bit more than that to continue the work because it's  
6 been difficult with a few other activities requiring  
7 water other than just camp use. They need it for dust  
8 suppression and they need it to compact sometimes the  
9 tailings in order to get the proper compaction when  
10 they're building the structure.

11                   So there's a few different uses, so  
12 we've actually applied to temporarily have that number  
13 increased, the one fifty (150) number, I mean.

14                   And water treatment is obviously where  
15 -- where the majority of that volume comes from  
16 considering we're -- we're doing 50- to 100,000 cubic  
17 metres of treatment every year now, right? But  
18 there's only anticipated one (1) year left of that.

19                   And the dams are retaining more than  
20 60,000 cubes, which is another Type A trigger. So we  
21 need to consider those things when we're looking at  
22 how we're going to switch from remediation to adaptive  
23 management.

24                   So meeting the -- meeting those  
25 remedial objectives removes the Type A triggers. So

1 completion of the -- of the TCA no longer will require  
2 water treatment because all of the tailings-impacted  
3 material and the tailings themselves, waste rock is  
4 all going to be contained under an impervious cover.

5           So any water that -- that lands in the  
6 site through precipitation at that point in time is  
7 going to flow off and remain clean, so -- so we don't  
8 need to treat water. So our direct water use would  
9 fall below that 300 cubes a day, right? So our Type A  
10 trigger, essentially, would be gone for water  
11 treatment.

12           And then the dam removal and channel  
13 construction. So we'd no longer retain any  
14 substantial amounts of water on site so, again,  
15 trigger gone.

16           So remedial objectives will be achieved  
17 once free flow is restored between Mill Pond and  
18 Hambone Lake, which we'll get into a little bit more,  
19 but that's the ultimate goal is this drainage pathway,  
20 this -- the historic drainage pathway through the site  
21 is from Mill Pond to Hambone Lake, which, since the  
22 mine opened, that has not been the case, right? It's  
23 been a modified flow path. Mill Pond drains in the  
24 opposite direction that it normally would want to,  
25 right? So when we restore that natural drainage, then

1 that's, essentially, when the remedial objectives will  
2 be achieved.

3                   That milestone will mark the completion  
4 of the remediation phase and the commencement of  
5 adaptive management.

6                   So once we enter into adaptive  
7 management, what's it going to look like?  
8 Essentially, it's a monitoring kind of inspection  
9 phase where we get to -- to inspect the remediation  
10 features: the tailings containment area, the channels  
11 we've built, stabilization structure -- structures,  
12 quarries, what-not, to make sure that they're  
13 performing as -- as intended and -- and are stable,  
14 right, geotechnically essentially.

15                   So site presence. For the first bit  
16 anyway -- I put a question mark on this -- freshet  
17 will likely be there full time, right, just until all  
18 -- like the first few years it's expected that it's  
19 not going to be as -- as sound or stable or unlikely  
20 to be just because vegetation hasn't quite taken off  
21 and what-not yet.

22                   So -- so just to make sure we don't get  
23 any surprises, we'll probably have a full-time  
24 presence during freshet for the first bit anyway until  
25 things get confirmed that we are nice and stable. So

1 that's potential to last for all of adaptive  
2 management, but -- but likely only just at the  
3 beginning, maybe the first year or two (2).

4                   We'll also have monthly monitoring and  
5 -- and as required. As required would be,  
6 essentially, like if there was a major rain event or  
7 anything like that that -- that we might want to pay  
8 attention to, it might require a flight out or  
9 something to -- make sure.

10                   During adaptive management, we will  
11 continue on with the SNP program obviously. Highly  
12 likely to be moved to, again, monthly basis at that  
13 point.

14                   And response to identified concerns.  
15 Oh, yeah. So identified concerns being that during  
16 these monitoring inspection periods, if there's  
17 anything noted, then -- then we'll likely be  
18 maintaining a small camp with limited equipment to  
19 respond to any of these identified concerns where we  
20 can perform repairs, maintenance, earthworks, manage  
21 the water, and that type of thing, okay?

22                   So -- so it's not like we'll be gone.  
23 There'll still be means there and equipment to -- to  
24 respond to any concerns.

25                   Time line. Adaptive management. It's

1 expected to -- it's tough to -- to tag an exact number  
2 onto these things. We expect it to be about five (5)  
3 years but, ultimately, it's until we see that the site  
4 has reached a steady state where there's no -- no  
5 annual works required anymore to -- to maintain those  
6 remedial objectives that we set out and -- and  
7 completed during Phase II, right?

8           So we might have to go back and tweak  
9 some things. Like if the cap starts to slump  
10 somewhere, we might need some maintenance or something  
11 like that that -- that needs to be addressed.

12           But once we have to -- once we've come  
13 to the point where we don't have to do that any more,  
14 the inspections essentially recommend that, no, you're  
15 good, we don't need to do this every year any more,  
16 then -- then we can pretty much call out at that point  
17 and say adaptive's management's over. We can enter  
18 into our long-term management phase, right?

19           So it's anticipated five (5) years,  
20 2019 to 2023, which, like I mentioned before, will go  
21 to the end of the renewed water licence and land use  
22 permit there. And, yeah, I just said, so long-term  
23 manage -- long-term monitoring, sorry, will commence  
24 once adaptive management phase has reached that steady  
25 state.



1                   We'll delve into monitoring here a  
2 little bit anyway. So during Phase II, we'll  
3 obviously continue on with the SNP program, monitoring  
4 for baseline condition and -- and construction  
5 monitoring, right?

6                   So right now, the SNP program was --  
7 was -- well, it was built during, what, 2009, I guess,  
8 when this was all being reviewed, 2008/2009. And we  
9 didn't know much about the water quality on site or  
10 what was going to happen during remediation to the  
11 water quality.

12                   But we've been monitoring that for five  
13 (5) or six (6) years now. We've got a great  
14 understanding of what's going on, or a pretty great  
15 understanding. And -- and we are highly likely going  
16 to want to pare that down for the remainder of Phase  
17 II.

18                   So -- so in August, when we get a  
19 chance to review the water licence, the draft water  
20 licence, I think you'll be able to -- or you can  
21 expect to see from CARD some proposed modifications to  
22 the current plan, right?

23                   There's a lot of sites that we don't  
24 even get detection limit hits any more, right? So --  
25 so there's not much point continuing on with them

1 considering that 1.2 million cubic metres of -- of  
2 tailings-impacted water has been treated, and now  
3 we're down to substantially less annual volumes.

4           And we only have one (1) more year  
5 planned for water treatment. It's unlikely we need to  
6 have this full-scale SNP program that we started with.  
7 So -- yeah. And -- and we'll be continuing on with  
8 our annual geotechnical inspections.

9           During adaptive management, it's  
10 expected to switch to a monthly SNP program for  
11 baseline monitoring. It'll probably look a lot like  
12 this SNP program for Phase II for maybe the first  
13 year, but, like it says here, we're likely to revise  
14 that, or apply to revise that SNP program based on the  
15 outcome of the Status of Environment Report, okay,  
16 which is -- will come out during the first year of  
17 adaptive management.

18           So the first -- the first year of  
19 adaptive management, and then subsequent years we'll  
20 likely have a slightly different anyway SNP program.  
21 Status of Environment Report will help us refine that  
22 an awful lot.

23           And then also during adaptive  
24 management, we'll have to do our follow-up aquatics  
25 monitoring in year 1 as per the current water licence.

1 So as per the current water licence, I forget what's -  
2 - what condition it is, but -- but it requires an  
3 aquatics monitoring program which we've done. So it's  
4 essentially fish, invertebrates, and shore birds, I  
5 believe, and -- and waterfowl.

6           And -- and so part of that required --  
7 it was basically you do it at the beginning and you do  
8 it at the end. And so it's a post-remediation, pre-  
9 and post-remediation monitoring program. So that  
10 would be done year 1 of adaptive management, first  
11 year following remediation, right?

12           So we'll keep that commitment if -- to  
13 button up the aquatics monitoring, and -- and then the  
14 annual geotechnical inspection will -- will continue.

15           Long-term monitoring, again covered  
16 under a separate land use permit and water licence.  
17 It will be reduced down highly likely to an annual  
18 monitoring program. And the long-term monitoring  
19 baseline condition will be based on a few different  
20 things.

21           We have a Human Health and Ecological  
22 Risk Assessment being done this year, right? So it's  
23 all contracted and -- and any additional sampling work  
24 and what-not at site is being done this summer. That  
25 report will be out I believe by December this year.

1 Yeah.

2                   And so -- so that will help shape the -  
3 - or give us a sense of what the -- the long-term  
4 manage -- long-term monitoring baseline condition will  
5 be.

6                   The Status of Environment Report will  
7 be out in 2020, anticipated. And -- and again, that's  
8 going to show any risks on site that maybe need to be  
9 monitored and adaptive management monitoring results.

10                   So from 2019 to 2023, again,  
11 anticipated time line. We're going to learn an awful  
12 lot more about how the site's responding post-  
13 remediation, right, so that we can -- we can tweak the  
14 long-term monitoring program.

15                   So post-remediation, what's the site  
16 condition? Well, we had an HHERA, a Human Health and  
17 Ecological Risk Assessment, conducted back in 2008 --  
18 2007 and 2008. And it was predicted -- so the HHERA  
19 will make predictions about post-remediation  
20 condition.

21                   It's predicted that, for metals, that  
22 it's -- that -- that it's going to be a low risk to  
23 human health and ecological organisms. They're  
24 expecting short-term impacts in the majority of  
25 downstream, but -- but in the long term, everything to

1 recover, right?

2                   Now, they compared all of their  
3 predictions against CCME Canada-wide standards for  
4 protection of aquatic life, right? And -- and it's  
5 deter -- determined in the 2008 HHERA that Hambone  
6 Lake sediments are too impacted from the historic  
7 mining to be in compliance with CCME in any case.

8                   You know, you could shut water off, all  
9 inputs into Hambone Lake, and it's -- it's not going  
10 to recover within the time frame we're dealing with  
11 here, right? It's -- the sediment's already too  
12 impacted with arsenic from the pre-mining condition,  
13 so as we got it.

14                   Powder Mag Lake, which is the next lake  
15 down, may have periodic exceedances of CCME for the --  
16 for the short term anyway. And Sandy Lake's likely to  
17 remain compliant.

18                   So I -- I threw this map of the site up  
19 again just so you'd have a sense of what I'm talking  
20 about. Again, here is the TCA, where it's going to  
21 be. Water treatment has discharged water into Hambone  
22 Lake right here for -- since the beginning of the  
23 program.

24                   It's always been into Hambone Lake.  
25 Hambone Lake flows into Powder Mag Lake which flows to

1 these little lakes into Sandy, which comes out just  
2 right here. No, sorry, right here. There's the  
3 bridge. And then Sandy's a pretty large lake, you  
4 see.

5                   So, like I said, Hambone already has  
6 impacted sediments from the -- from the mining  
7 operations, unlikely to recover to CCME levels anytime  
8 in the near future. Powder Mag Lake might see some  
9 exceedances in the future potentially, and Sandy Lake  
10 is more unlikely.

11                   2000 -- right. So we're going to  
12 repeat the HHERA this year to determine if the  
13 assumptions and predictions from the original HHERA  
14 have maintained, see if they were correct.

15                   And -- and if they're not, hopefully  
16 we'll be able to develop more accurate predictions of  
17 the post-remediation water quality and any risk to the  
18 downstream environment and human health as well. And  
19 this will all be used to establish downstream water  
20 quality compliance point and criteria, post-  
21 remediation, remember.

22                   And, yeah, so that's pretty much it for  
23 now. There's -- there was -- there's a lot of things  
24 going on that we could have got into the real details,  
25 nitty-gritty of. Most of it was already in -- in the

1 application, and, you know, I -- I thought we'd just  
2 kind of cut it off at there, and -- and we'll deal  
3 with more of the specifics of these tasks in the  
4 subsequent sections that you guys already have.

5                   So with that, I'll leave it, and we'll  
6 move on to questions, I suppose.

7

8 QUESTION PERIOD:

9                   THE FACILITATOR: Thank you, Murray.

10 It's Rebecca here. I'm just wondering, Murray, do you  
11 have the presentation available right now for us to  
12 post online so that Morag or others on the phone could  
13 follow along?

14                   MR. MURRAY SOMERS: Yeah. It's Murray  
15 here. Yeah, we -- we've got the presentation. Do you  
16 guys have the capability to -- to upload it? Yeah.  
17 Okay. You know how to find it? Okay.

18                   THE FACILITATOR: Okay. Rebecca here.  
19 Thanks for that. We should have asked ahead of time.  
20 Sorry, Morag on the phone. We'll get this posted as  
21 soon as possible. And for others in the room, it will  
22 then be on our online review system, and also posted  
23 on the registry so folks can reference it again in the  
24 future.

25                   So we do have the opportunity -- I know

1 some of these topics will be discussed in more detail  
2 later today. But let's take the opportunity now just  
3 to go around the room to see if there are any  
4 questions, points of clarification on the general  
5 overview that Murray just gave. So we'll start with  
6 folks in the room.

7 MS. GEORGINA WILLISTON: Thank you.  
8 Georgina Williston, with Fisheries and Oceans Canada.  
9 I'll defer this to Morag on the phone because she's  
10 familiar with the file.

11 THE FACILITATOR: Thank you.

12 MS. MORAG MCPHERSON (by phone): Morag  
13 McPherson here, Fisheries and Oceans. I don't have  
14 any questions at this point. Thank you.

15 MR. RICK WALBOURNE: Rick Walbourne,  
16 ENR. I've just got a couple of quick questions here.  
17 I've got some more when you get into the details.

18 Regarding the scope of remediation, I'm  
19 sure this was probably covered in '08 or '09, but just  
20 for my information, you did mention that the sediments  
21 in Hambone Lake were -- seem to be pretty  
22 contaminated, and that's affecting the water quality.

23 Is there any reason those sediment were  
24 never included in the initial remedial action plan or  
25 within the scope of Tundra, or -- or what's the



1 background of why the sediments in Hambone Lake aren't  
2 being considered within the scope of the remediation  
3 project?

4 MR. MURRAY SOMERS: Murray Somers  
5 here, with INAC.

6 Rick, as far -- the original  
7 remediation plan that was developed for Tundra Mine  
8 was developed in consultation with a lot of  
9 professionals and -- and with the concerned Aboriginal  
10 groups.

11 And -- and it was decided that -- that  
12 where they landed was -- was where it needed to be.  
13 And I'm -- I'm quite certain, but I'd have to verify  
14 for you, to be honest, why the sediments weren't  
15 addressed was probably highly likely that addressing  
16 those sediments would probably cause more risk to the  
17 downstream environment, right?

18 Because once you start disturbing  
19 sediments underneath, there's -- it's guaranteed that  
20 you're going to get a lot of that sediment which is  
21 hosting the metals moved downstream. So I think it  
22 was -- it was probably left so that we wouldn't impact  
23 downstream lakes even more.

24 MR. RICK WALBOURNE: Rick Walbourne,  
25 ENR. Yeah, thanks for that, Murray.

1                   Yeah, I -- I don't recall all the  
2 background, but that was probably something that might  
3 have been covered in that initial risk assessment. So  
4 the sediment might have been looked at and it might  
5 have been determined that leaving -- leaving them as-  
6 is might have been the best course of action.

7                   Another quick question. You said that  
8 risk assessment was going to be redone I guess in  
9 2016. Is that something that's going to be made  
10 available like through the water licence for review,  
11 or is that just something that CARD is dealing with,  
12 like the federal department's expert support on, or  
13 will that be -- will that be available at all through  
14 the water -- through the water licensing process --  
15 not during this renewal process, I mean, but  
16 subsequently, just as a part of the water licence.  
17 Thanks.

18                   MR. MURRAY SOMERS: Yeah. Murray  
19 Somers, with INAC. Right now, we -- we've contracted  
20 it for our own understanding of the site, right? It -  
21 - it wasn't a regulatory requirement to do that again.

22                   I can't recall if the original HHERA  
23 was provided to the Board or not, but it's not a  
24 requirement of the licence anyway. But it might have  
25 been provided kind of more as -- as information or

1 appendix or something like that to -- to some initial  
2 conversations.

3 But -- but, yeah, at this time, it's  
4 just a CARD document. But, you know, we'll have to --  
5 to talk to the Board and figure out whether or not we  
6 want to make that -- or whether it becomes a public  
7 document.

8 Anything to add, Joel?

9 MR. JOEL GOWMAN: I just wanted to add  
10 the original HHERA was one (1) of the appendixes  
11 within the Remedial Action Plan that was provided  
12 within the application for the original water licence.  
13 So that would be part of the public registry.

14 If the Board has questions after we've  
15 finalized our -- our updated risk assessment, we can  
16 follow up with the Board at that time and answer  
17 questions further.

18 THE FACILITATOR: Rebecca Chouinard.  
19 I -- I just -- Rick, if you check condition D-34 of  
20 the existing licence, it does speak a little bit to  
21 information that is required based on the findings of  
22 -- of the Health -- the acronym, HHERA.

23 But I'd -- I'd suggest taking a look at  
24 that and providing any recommendations as part of your  
25 intervention or review, if that's sufficient, or if

1 there's something different or more that -- that you  
2 would like to see with the supporting rationale, of  
3 course.

4 MR. RICK WALBOURNE: Yeah. Rick  
5 Walbourne, ENR. Thanks. I'll take a look at that. I  
6 have no further questions at this moment.

7 THE FACILITATOR: Okay. Anybody from  
8 Board staff?

9 MS. HEATHER SCOTT: It's Heather  
10 Scott, with the Board. While we're on the topic of  
11 the HHERA, I was just wondering -- this may be a  
12 question for consultants.

13 When they evaluated your remediation  
14 treatment against CCME and the impacts downstream,  
15 what criteria were you looking at? What -- what is --  
16 what was your treatment criteria, and how does that  
17 compare to what's in the licence now? Because that  
18 was done pre establishing the criteria in the licence.

19 MR. JOEL GOWMAN: I think we can  
20 probably follow-up with our -- with our consultants on  
21 that, as you mentioned. But -- sorry, it's Joel  
22 Gowman, with INAC.

23 Again, we can -- we can follow-up with  
24 our team to provide more details on the sequencing on  
25 how the criteria were developed. But it was developed

1 with consideration for CCME, and also with the risk  
2 assessment values that were incorporated from that  
3 2008 Risk Assessment.

4 MS. HEATHER SCOTT: It's Heather  
5 Scott, with the Board. I think what we'll do is turn  
6 that into an Information Request following the tech  
7 session. And we'll -- we'll figure out the wording  
8 for that during a break and then bring that up later  
9 so we agree on that.

10 MR. MURRAY SOMERS: Yeah. It's Murray  
11 Somers here, from INAC. And I'll be speaking to how  
12 the -- how that -- the water treatment effluent  
13 criteria was developed, right? And part of that's  
14 through the HHERA. And I -- I've got a slide coming  
15 up later on on how that was done, so it might answer  
16 your question.

17 THE FACILITATOR: Rebecca here. I  
18 think as a moving-forward action item, we can work on  
19 crafting what that Information Request would look  
20 like. And then perhaps as we go throughout the day,  
21 if that information -- if we're -- if we're satisfied,  
22 then we can strike it from the list. And otherwise,  
23 we'll keep it on for -- or tweak it as the day goes  
24 on. And at the end, we'll finalize the wording of  
25 that.

1 --- INFORMATION REQUEST NO. 1:  
2 INAC-CARD, based on all of  
3 the current and historical  
4 water quality data  
5 downstream of the water  
6 treatment facility,  
7 including but not limited  
8 to information collected  
9 for the human health and  
10 ecological risk assessment  
11 baseline data and annual  
12 reports to provide  
13 evidence and rationale  
14 that supports INAC-CARD's  
15 recommendation to maintain  
16 the discharge criteria  
17 identified in part B, item  
18 6, of the existing water  
19 licence, MV2009L80008.  
20

21 MS. HEATHER SCOTT: It's Heather  
22 Scott, with the Board again. We can maybe defer this  
23 to a later time if you address it.

24 But just looking at the state -- Status  
25 of the Environment Report -- because I know under the

1 current water licence, that was to be submitted I  
2 think -- I forget the date, but it's already passed.

3                   And now you're proposing 2020, so  
4 that's quite a long time since it was originally  
5 proposed. And I'm just wondering your rationale on  
6 that. Thanks.

7                   MR. MURRAY SOMERS: Sure. The --  
8 under the current water licence, it was due in -- I  
9 think it was February of this year, and -- and which  
10 was anticipated to be one (1) year following  
11 remediation, right? So the Status of Environment  
12 Report was, essentially, a post-remediation report.

13                   And then with -- with the Phase II now  
14 anticipated to be completed in 2018, I proposed that  
15 it be likely 2020, about eighteen (18) months  
16 following remediation, to get that completed so that  
17 we had -- I thought that was a pretty reasonable time  
18 line just because it'll allow us to incorporate that  
19 final year's data into it, and maybe even some, if not  
20 all, of the first year of adaptive management's  
21 monitoring data into that report as well so we can get  
22 a sense of not only what -- what was the site like and  
23 what is it like during remediation, but even in a  
24 slightly post-remediation environment.

25                   I will be talking more about the Status

1 of Environment Report later on as well.

2 MS. HEATHER SCOTT: It's Heather  
3 Scott, with the Board. Thanks, Murray.

4 THE FACILITATOR: Okay. Rebecca here.  
5 I just had a quick question. And we might touch on  
6 this stuff later in the day as well, but I just wanted  
7 maybe a little bit more information just on the  
8 thinking or discussions that have happened in your  
9 group around the long -- or the -- the short-term  
10 monitoring, the five (5) years.

11 And -- and you mentioned, you know,  
12 that's to ensure that the site has reached its steady  
13 state, and you spoke to a lot of the geotechnical  
14 concerns. I'm just wondering what conversations or  
15 discussions you've had about the geochemical concerns  
16 and the water quality concerns, and particularly that  
17 short window of five (5) years.

18 If you're still quarrying materials for  
19 the cap and there's PAG rock on site, you know,  
20 sometimes it takes a long time before you see the  
21 effects of any acid generation or metal leaching.

22 So, I'm just wondering what  
23 conversations you've had about that.

24 MR. JOEL GOWMAN: So -- Joel Gowman,  
25 with INAC. You mentioned quarrying of rock on site.



1 Actually, our -- our quarry operations are more of a  
2 stripping of granular material. So we've -- we'd  
3 earlier on looked at doing a drill and blast program,  
4 but with the potential acid-generating  
5 characteristics.

6 We moved away from that approach and  
7 have been going after -- after more loose, granular  
8 material for our requirements. So we're not  
9 anticipating to have any further contributions from  
10 ARD rock that way.

11 And our waste rock that is present on  
12 site from the -- from the historical activities has  
13 been consolidated and placed within the tailings  
14 containment area. So any of the water that would be  
15 released through that would be actually captured  
16 within the TCA and monitored within that.

17 Once we've -- once the connection  
18 between the Mill Pond and Hambone has been re-  
19 established, we'll have SNP stations within that --  
20 that overall system to monitor how the chemistry's  
21 changing, or perhaps just monitoring its -- its  
22 hopefully steady state at that point.

23 With regards to the geochemistry of the  
24 overall system, we're currently contracting AECOM to  
25 complete a geochemical analysis of our exposed cleared

1 areas within the tailings containment area.

2                   So that -- that additional studies on  
3 the geochemistry and the water balance within the  
4 overall system will help guide us towards any minor  
5 design tweaks that we need to ensure that our overall  
6 objectives are met, and also to feed into our -- our  
7 team's consideration of -- of compliance points and  
8 parameters that we feel would be prudent for us to  
9 include within our monitoring program.

10                   Hopefully that adds some clarity to  
11 that point.

12                   THE FACILITATOR:    Rebecca here.  
13 Thanks.   That's helpful, and I must admit I haven't  
14 gone through every page of the information you've  
15 submitted, so I apologize if that information's there.

16                   I'm just wondering if you have planned  
17 kinetic testing ongoing, and any field cells to verify  
18 the -- any metal loading predictions.

19                   MR. JOEL GOWMAN:    At this time, we  
20 don't have kinetic testing ongoing on any of the --  
21 any of the rock.   The -- the waste rock would be --  
22 like I mentioned, would all be enclosed within the  
23 lined area, within the TCA.

24                   And with that being a low-permeable  
25 cover on top of that material, we're expecting that

1 the -- the water infiltration -- surface water  
2 infiltration through that material should be quite  
3 minimal. And we should be fairly protective of the  
4 environment with that -- that system in place.

5 MS. HEATHER SCOTT: It's Heather  
6 Scott, with the Board. So I just wanted to verify  
7 that your work with AECOM will also consider when the  
8 East Upper dam is dismantled and natural flow is re-  
9 established.

10 MR. JOEL GOWMAN: That's correct. The  
11 overall water balance within the -- the catchment that  
12 will be -- when that historical catchment is re-  
13 established, when we remove the existing dams, should  
14 allow that -- the full scope of that will be included  
15 within the work that AECOM is currently doing for us  
16 this summer.

17 MS. HEATHER SCOTT: It's Heather  
18 Scott, with the Board. And when do you anticipate  
19 that study by AECOM will com -- be complete?

20 MR. JOEL GOWMAN: Joel Gowman, with  
21 INAC. The -- the work with AECOM will be completed --  
22 there's a number of tasks actually within the overall  
23 scope that they're working on. I believe the water  
24 balance and the geochemistry will be completed by  
25 September, possibly October.

1 (BRIEF PAUSE)

2

3 THE FACILITATOR: Okay. Rebecca here.  
4 Just -- I'll scan the room one (1) more time. Anybody  
5 else with any questions from a general sense on the  
6 overall presentation? Oh, Heather. Sorry, Heather.

7 MS. HEATHER SCOTT: It's Heather  
8 Scott, with the Board. I was curious about your  
9 timing with your next HHERA. You said that was  
10 happening currently.

11 Wondering why you're doing that during  
12 the Phase II process and not waiting until it's  
13 completed, and if you anticipate the results of that  
14 HHERA will inform any changes to Phase II?

15 MR. JOEL GOWMAN: The HHERA is largely  
16 focussed on looking at what are -- what we expect to  
17 be end-of-project site conditions to make sure that  
18 our assumptions that were made in the 2008 Risk  
19 Assessment are -- are valid, and to make sure that  
20 we've got some opportunities, if there are minor  
21 changes that are -- are suggested through the results  
22 of the HHERA, that we have a contractor in place in  
23 order to actually complete that work.

24 If we were to hold off on completing  
25 that risk assessment until after all of the remedial

1 activities are in place, we wouldn't have a  
2 contracting tool or any of the physical equipment or  
3 infrastructure to allow us to make adjustments in the  
4 future so.

5 MR. MURRAY SOMERS: It's Murray Somers  
6 here, with INAC. And Joel just gave a great synopsis  
7 there of -- of why we -- why we are doing HHERA right  
8 now. And -- and he's absolutely right that we want to  
9 know if there's any remaining risks that could  
10 addressed while there's still a major contractor on  
11 site with a full -- full amount of equipment.

12 As well, we want to understand what our  
13 -- our water quality should be looking like post-  
14 remediation, right? And -- and that will -- will  
15 again identify any -- any room for -- for tweaks that  
16 need to happen and that can get done. Yeah, so if we  
17 waited too long, then we might miss that opportunity,  
18 so it's being done right now.

19 But also, right now our water quality  
20 compliance is for the effluent at the end of the pipe,  
21 right? So once water treatment is finished and -- and  
22 we have free water flowing from Mill Pond to Hambone  
23 Lake, then -- then we want to know what that water  
24 quality's going to look like and -- and where we can  
25 establish a future compliance point, right? So the

1 HHERA is going to help identify that.

2 THE FACILITATOR: Rebecca Chouinard,  
3 from the Board. I -- I know Board staff have been  
4 talking about, you know, the water quality and  
5 compliance points looking into the future.

6 So I think we'll hold off on -- we do  
7 have a few questions about that, but we'll wait until  
8 later in the day when we're actually talking about  
9 that in a little more detail.

10 So with that, any other questions or  
11 points of clarification from folks in the room? And  
12 how about anyone on the phone?

13 MS. MORAG MCPHERSON (BY PHONE): No,  
14 nothing at this point, thank you.

15 THE FACILITATOR: Okay. Thank you.  
16 Then with that, we will move on to the next topic,  
17 which is the Mill Pond drawdown on the agenda. And I  
18 believe Murray's going to give another quick  
19 presentation about that.

20 Tyree, just before we go -- move to the  
21 presentations, have -- has the presentation been  
22 loaded to the ORS at this point? Okay. We are  
23 working on getting it on there.

24 Morag, we apologize for the  
25 inconvenience, and it should hopefully be up on our

1 site really soon. We're working on it here.

2 MS. MORAG MCPHERSON (BY PHONE):

3 Great. Thanks very much.

4

5 PRESENTATION BY INAC-CARD:

6 MR. MURRAY SOMERS: Murray Somers,

7 with INAC. Yeah, so now we'll move on to the Mill

8 Pond drawdown portion. My apologies, some of these

9 slides are a bit wordy. Just want to make sure that -

10 - that I get it right, you know.

11 So the Mill Pond drawdown's associated  
12 with the removal of East Upper Dam which is a tailings  
13 core dam, right? So there -- it's the last remaining  
14 tailings core dam on site, some still remaining of the  
15 East Upper dam, but not very much.

16 And -- and so as -- to meet our  
17 remedial objectives, it has to go. And in the process  
18 of removing it, the -- it'll -- it'll actually restore  
19 the pre-mining water level on Mill Pond.

20 And it'll also restore the pre-mining  
21 drainage pathway from Mill Pond to Hambone Lake  
22 because, as I said before, since East Upper dam went  
23 in, which was at the beginning of -- of the -- the  
24 early stages of Tundra Mine's mining history, the  
25 water has not flown the way it naturally would want to

1 go.

2                   It naturally wants to fall north to  
3 Courageous Lake, but right now it actually flows south  
4 originally into a Matthew -- Matthews Lake system and  
5 ultimately to Courageous Lake, but in a very different  
6 pathway. We call it Pathway 2.

7                   So general process. Well, the East  
8 Upper dam removal will require that the Mill Pond  
9 water level be temporarily lowered approximately a  
10 metre and a half down to about 442.5 metres above sea  
11 level. So, yeah, that's a 1.5-metre drop. So right  
12 now it sits about four forty (440).

13                   It may not have to go down that much,  
14 but that's kind of the precautionary level. Most  
15 people -- it's -- it's obviously why it would have to  
16 go down because the contractors will have to work in  
17 dry conditions, right, to -- to excavate that dam and  
18 to build the new drainage channel from Mill Pond,  
19 right? So that's why it needs to go down.

20                   So the dam would be excavated, followed  
21 by construction of the -- the new drainage channel  
22 from Mill Pond. And that will flow into Upper Pond  
23 which will eventually connect down to Hambone Lake and  
24 which will restore that historic drainage.

25                   So just to give people a sense of what



1 that looks like, I threw up a few photographs here.  
2 It seems like every photograph I put up here is taken  
3 from a different vantage point, but -- so my apologies  
4 for that. But -- but I guess as we're flying to and  
5 from site, I'm not always thinking of consistency in  
6 presentations.

7                   But what you're looking at here is  
8 we're actually looking kind of southeast. So there's  
9 the camp right there, so that's where the former mine  
10 infrastructure was.

11                   This is Mill Pond, this is where the  
12 Upper Pond tailings containment area was, this is the  
13 Lower Pond tailings containment area, and that -- what  
14 you see, that nice flat spot there, is -- is the cap  
15 that's -- that's been installed already, okay, for the  
16 TCA. Again, you see it's typically very dry up there  
17 now where it used to be a gigantic tailings pond.

18                   This here is East Upper dam. There's a  
19 little wetland adjacent to it that has some -- some  
20 tailings material in there. It looks like it was  
21 basically spilled during the construction of the dam,  
22 just not being very careful.

23                   We can't figure out any other reason  
24 why it would be there, but -- yeah, and there's some  
25 sediments and what-not that are -- are impacted

1 obviously from -- from having the -- being in such  
2 proximity to that dam.

3                   Going in a little bit closer, so it's  
4 the same thing again: camp, Mill Pond up here, Upper  
5 Pond. But that's the dam. You can actually see it  
6 there, so that's what's going to be removed -- not an  
7 enormous dam, right? Not -- not huge. Probably be  
8 removed in about a week. Yeah, and there's this  
9 wetland.

10                   So looking at it from above, again  
11 different vantage point, Upper Pond on this side, Mill  
12 Pond over here. This is the dam, this shaded area.  
13 This dotted line shows you where the actual tailings  
14 core and impacted material is sitting right now  
15 through -- when -- that was figured out through  
16 assessments, and that's what's going to be removed.

17                   So in order to do that, they're  
18 obviously going to have to draw this down to produce  
19 dry conditions because this is a wetland right here.  
20 And then once the excavation's done, slopes are  
21 stabilized, then they're going to build the discharge  
22 channel which will be lined and -- and engineered  
23 properly.

24                   You see some of the profile drawing of  
25 it here all lined and -- and with rip-rap. And

1 that'll be constructed to restore that drainage  
2 pathway.

3                   Now, we have a couple of options which  
4 some of you might recall from the amendment request  
5 back in 2013 for the current water licence when we  
6 addressed this work. The primary option is actually  
7 to pump water direct from Mill Pond into Hambone Lake.

8                   There's a few reasons for that which  
9 I'll get into in a minute. The -- and then there's  
10 the secondary option using an aquadam which I'll get  
11 into in the next slide. But it'll require  
12 approximately 132,000 cubic metres.

13                   Again, that's to bring the water level  
14 down a metre and a half, which is conservative, right?  
15 So -- or it's -- it's a maximum essentially like that  
16 we'd have to draw down, or highly likely. And it's  
17 assumed we don't have to bring it down that much, but  
18 just in case, that's the -- that's the target we're  
19 trying to hit right now which equals approximately  
20 132,000 cubes.

21                   Additional pumping might be required to  
22 maintain this four forty-two point five (442.5)  
23 elevation on the water level. And that's just simply  
24 because of natural recharge into the pond. So if we  
25 draw it down, they can start working.

1                   And as they're working, if there's a  
2 lot of recharge, which isn't anticipated -- it's a  
3 small pond and a small catchment -- just to maintain  
4 that dry four forty-two point five (442.5), then they  
5 might have to do a little bit more pumping into  
6 Hambone Lake just to keep it where they need it during  
7 the construction phase and excavation phase.

8                   And then, once it's all done and the --  
9 and the channel's constructed, then Mill Pond will  
10 just be allowed to recharge up to the pre-mining water  
11 level, which will be the invert, the base of that  
12 drainage channel.

13                   Second option is to temporarily install  
14 an aquadam between Mill Pond and the East Upper dam,  
15 so essentially in that wetland area between the -- the  
16 dam and the pond, okay? I'll -- I'll show a slide  
17 showing that location in a minute.

18                   But how that will work, so an aquadam  
19 is -- is basically a gigantic tube with sections  
20 inside of it which get filled and -- and act as a dam.  
21 So -- so I'll -- I don't know if I have a picture of  
22 it, but -- of what one looks like, but I'm sure you  
23 can get the idea.

24                   It's a big tube of water, a gigantic  
25 tube of water, that will be heavy enough to -- to

1 actually prevent flow from Mill Pond that will allow  
2 the -- the contractor to excavate and build the  
3 drainage channel at that point.

4                   And then following the construction of  
5 that channel, then the aquadam would actually have a  
6 controlled dewatering. So the volume of water from  
7 the -- that's in the actual aquadam would be allowed  
8 to drain out through that drainage channel.

9                   And then as it's -- as the -- the  
10 aquadam is being lowered, then you're actually going  
11 to get Mill Pond water level spill over the top of it  
12 and -- and go down the drainage channel as well,  
13 right? So that's -- that's the process, again  
14 equalling roughly the exact same amount of water  
15 withdrawal from Mill Pond to get it down to its pre-  
16 mining water level.

17                   Again, a different vantage point,  
18 sorry. Upper Pond up here, Mill Pond down here.  
19 That's East Upper dam. So the aquadam would  
20 essentially go on the fringe or likely to go on that  
21 fringe if it was to be used, the -- the wetland and  
22 Mill Pond.

23                   And again, that same image shown  
24 before. Aquadam would likely go in a location such as  
25 that.

1                   So discharge to Hambone. I just wanted  
2 to mention this because I know it got brought up in  
3 the review comments. It's something we've been  
4 discussing over the years is to remain protective of  
5 the downstream channel stability from the Tundra Mine  
6 site.

7                   It'll be a maximum discharge rate of  
8 300 cubic metres per hour to Hambone Lake from all  
9 sources, right? That includes water treatment, right?  
10 So if water treatment's pumping at 300 cubic metres  
11 per hour, that means Mill Pond can't pump anything,  
12 right? We can't discharge anything from -- from Mill  
13 Pond.

14                  And if -- if water treatment's pumping  
15 at one fifty (150), then we could in theory pump one  
16 fifty (150) into -- from Mill Pond. And -- and so you  
17 get the picture, right? All sources to Mill -- or to  
18 Hambone Lake will not exceed 300 cubic metres per hour  
19 in order to stay protective.

20                  I know Golder did the -- I think it was  
21 Golder did the modelling of that, and it showed that  
22 four fifty (450) should probably be safe. But we  
23 knocked it down during the original review to three  
24 hundred (300) just to be precautionous.

25                  So -- so -- and with that -- that

1 number, we've never had any issues at all downstream  
2 from monitoring. There's never shown any -- any bits  
3 of state -- site -- or slope impacts at all.

4                   What's this next section? Oh, yeah.  
5 And -- and there was a few comments within the  
6 application as well that came up from reviewers that  
7 the Mill Pond drawdown was lacking in information in  
8 the water licence component because we had a land use  
9 permit and water licence application come in at the  
10 same time.

11                   That was my fault. I put the  
12 information in the land use permit, didn't mirror it  
13 into the water licence part. So I just wanted to let  
14 people know, if they haven't seen that Sections 4, 7,  
15 and 10 of the application were updated, and -- and  
16 they are available. You can see them on -- on the  
17 ORS.

18                   So they're not posted in the registry.  
19 It's posted in the Online Review System, and you can  
20 see it there. If you just click on INAC's comments,  
21 there'll be a little paperclip there. A click -- if  
22 you click on that, it will show the updated  
23 application as requested. And all the updated  
24 sections are highlighted in yellow so you can see  
25 them.

1                   And that's all I will say about Mill  
2 Pond for now.

3

4 QUESTION PERIOD:

5                   THE FACILITATOR:    Okay.  Thank you,  
6 Murray.  It's Rebecca here.  According to the reviewer  
7 comment table, there were some questions on the Mill  
8 Pond from folks from Fisheries and Oceans and ENR.

9                   So I'm wondering if we could turn the  
10 floor over to Fisheries and Oceans to see if there are  
11 any follow-up questions, particularly in regards to  
12 the updated sections that Murray submitted.

13                   MS. MORAG MCPHERSON (BY PHONE):    Hi.

14                   MS. GEORGINA WILLISTON:    Hi.  Georgina

15 --

16                   MS. MORAG MCPHERSON (BY PHONE):    Oh,  
17 sorry, Georgina.  Go ahead.

18                   MS. GEORGINA WILLISTON:    Sorry.  It's  
19 Georgina, with DFO.  I was just going to defer it to  
20 Morag.

21                   MS. MORAG MCPHERSON (BY PHONE):    Morag  
22 McPherson, with Fisheries and Oceans.  I was  
23 anticipating that.

24                   Luckily, I've been out to the site  
25 quite a number of times since 2008 with the Phase II



1 work happening, so I have a pretty good mental mind  
2 map of the site as Murray was going through this. So  
3 using my visualization, I was able to follow along  
4 pretty easily.

5                   Yeah, in our initial review of the  
6 renewal, the water licence renewal, there was -- just  
7 seemed to be some gaps in some of the information. So  
8 a lot of our recommendations in our review were just  
9 to make sure that the evaluations that have been done  
10 and the comments that have been provided on the  
11 renewal -- or, sorry, on the amendment with the Mill  
12 Pond drawdown, that that was -- that that information  
13 was still the same.

14                   Aspects hadn't changed, so we just  
15 recommended that that be more clearly put into the  
16 water licence application itself so that there weren't  
17 these two (2) pieces and so that, if there were areas  
18 that had changed or -- I think there were a couple of  
19 areas where it wasn't quite clear in how the amendment  
20 had gone, that we asked that that be incorporated in.

21                   And INAC has done that in updating  
22 those sections, addressed a lot of the key points  
23 around the actual activity that'll be happening for  
24 the Mill Pond drawdown, the predicted impacts, and  
25 some of the mitigations that have been discussed

1 previously in the 2013 renewal, that those be brought  
2 right in so it was clear that that was still  
3 commitments to -- to address those, and as well as the  
4 water volumes and the discharge rates.

5 I think there was a little bit of  
6 confusion on some of the wording between the  
7 applications and the licence in terms of averaged --  
8 daily averages versus just a discharge rate. So in  
9 the responses to our comments and within the updated  
10 application, they have addressed those.

11 And as far as we know, as far as what's  
12 been provided, the activity that was proposed for 2013  
13 is still required, as Murray had presented. And none  
14 of that has changed, so our previous sort of advice  
15 and comments in -- are still valid, and -- and nothing  
16 there has changed for us.

17 So it was just ensuring there was these  
18 clarifications, and that's all been put in there. So  
19 we don't have any -- I don't have any additional  
20 questions at this point as everything's been addressed  
21 with the update there. Thank you.

22 THE FACILITATOR: Okay. Wonderful.  
23 Morag, I just want -- wanted to confirm, is there any  
24 suggestion or recommendation on ways to better clarify  
25 the wording in the water licence, or was -- was that

1 not the issue at all?

2 MS. MORAG MCPHERSON (BY PHONE): No,  
3 it was just that, in the water licence itself, in the  
4 original one, it didn't really even talk -- it didn't  
5 mention some of the Mill Pond drawdown and some of the  
6 key activities and in the mitigation matrix, an impact  
7 matrix.

8 So I just wanted to make sure, even  
9 though it was attached as an appendix, the -- the  
10 amendment, that that activity was still the same  
11 activity, it was clear and reflected in the new --  
12 what was being proposed for the next couple of years  
13 of work at the site.

14 So it was just making sure that -- that  
15 that was clarified. And in speaking with INAC, as  
16 well as with the information that they've pulled in to  
17 the update, it's clear that that's the same activity  
18 still required and -- and is what they're proposing.

19 THE FACILITATOR: Great. Thank you.  
20 It's Rebecca here.

21 ENR, any follow-up on the comments that  
22 you made?

23 MR. RICK WALBOURNE: Rick Walbourne,  
24 ENR. The only comment we had regarding Mill Pond I  
25 think was the 300 cubic metres an hour, to make sure

1 that was a cumulative total and not -- because it was  
2 saying three hundred (300) from Mill Pond and three  
3 hundred (300) from the water treatment plant.

4 We're comfortable that that's been  
5 addressed. I -- I spoke to CARD a couple of times  
6 about that. But I did have a couple of questions on  
7 the presentation actually, if I could.

8 Murray, could you bring up -- I think  
9 it was slide 24, which was a -- a photo.

10 THE FACILITATOR: I just -- sorry,  
11 it's Rebecca here. I just want to interject for one  
12 (1) second and just let Morag know that the  
13 presentation has been emailed to you, and it is posted  
14 on the registry and on the ORS. So you should have it  
15 now in three (3) different ways.

16 MS. MORAG MCPHERSON (BY PHONE): Thank  
17 you.

18 MR. RICK WALBOURNE: Hi, Murray. Can  
19 you -- do you know offhand when this photo was taken,  
20 or how -- how recently, I guess, roughly? Is it like  
21 from '08, is it the last couple of years? I have a  
22 question in that regard, and I'm just trying to figure  
23 out what the situation is right there in terms of  
24 water level.

25 MR. MURRAY SOMERS: It's Murray

1 Somers, from INAC. I believe I took that from my 2015  
2 --

3 MR. RICK WALBOURNE: Okay.

4 MR. MURRAY SOMERS: -- folder, so I  
5 believe that was last year, you know. Yeah, because  
6 the -- the water treatment plant previous to that sat  
7 here, right? It was sitting in this spot. Yeah, the  
8 -- and the end of 2014, we -- we put all this material  
9 here, so this is a 2015 photograph --

10 MR. RICK WALBOURNE: Okay.

11 MR. MURRAY SOMERS: -- last year.

12 MR. RICK WALBOURNE: Yeah, thanks for  
13 that. Yeah, Rick Walbourne, ENR.

14 The reason I'm asking is obviously  
15 we've seen around -- you know, the majority, I guess,  
16 of the Northwest Territories, really noticeable around  
17 Yellowknife, we've seen drought conditions. A lot of  
18 lakes around Yellowknife, for instance, the water  
19 levels are very low. I've noticed 3 and 4 feet, for  
20 instance, in places.

21 So I guess my question is: Since this  
22 application was originally -- well, I guess the Mill  
23 Pond in 2013 -- has CARD noticed any difference in --  
24 in water, like stage elevations or anything around  
25 Mill Pond that the same amount of water may not be --

1 may not require dewatering as originally based on what  
2 you've seen? Or is it -- or have you even been  
3 really monitoring the elevations closely?

4 I know you've mentioned a couple of  
5 times that the one thirty-five (135) or the metre and  
6 a half, sort of 135,000 cubes or the metre and a half  
7 elevation may be conservative, so it may be less.

8 But I'm just curious if you've noticed  
9 anything lately with the dry conditions we've had over  
10 the last few years, if -- if that's been something  
11 you've noticed. Thanks.

12 MR. JOEL GOWMAN: Thanks, Rick, for  
13 your question. It's Joel, with INAC. I'm getting  
14 better at that part.

15 So despite the drier conditions across  
16 the Territories, we have noticed that, while we do  
17 have -- some lakes are a bit lower, Mill Pond,  
18 especially after freshet, has fairly consistently been  
19 up to the toe of the Upper East dam -- or East Upper  
20 dam.

21 So we're anticipating at this stage  
22 that the volume is still consistent with our original  
23 application.

24 MR. RICK WALBOURNE: Rick Walbourne,  
25 ENR. Thanks for that. Just one (1) more question.

1 Murray mentioned in his presentation  
2 that Mill Pond was to be temporarily lowered to -- to  
3 excavate the -- the dam there. It was my initial  
4 understanding I think of reviewing this in 2013 or  
5 whenever it was that that was to be a permanent  
6 situation because Mill Pond is actually higher now  
7 than it should be because of the dam. So when you  
8 lower it to remove the dam, I didn't think there was  
9 going to -- and you've already mentioned there's not a  
10 lot of recharge.

11 So my understanding I think when I  
12 reviewed this with actually DFO at the time, that the  
13 assessment was that that water was going to be down  
14 1.5 metres, and that was going to be pre-mining  
15 conditions.

16 So you just mentioned temporarily  
17 lowered. Can you clarify if that is temporary or if  
18 that's permanent? Thank you.

19 MR. JOEL GOWMAN: Thanks, Rick. It's  
20 Joel Gowman here again. So basically, we need to  
21 reduce the water level within Mill Pond down below the  
22 bedrock saddle that currently separates Mill Pond and  
23 Upper Pond.

24 We're anticipating that, once we've  
25 done that drawdown and put in place our discharge

1 channel, that there will be some rebound up to that --  
2 the base of the bedrock saddle that separates the two  
3 (2) -- two (2) drainage basins.

4 MR. RICK WALBOURNE: Rick Walbourne,  
5 ENR. Thanks for that clarification. I have nothing  
6 more at this point.

7 THE FACILITATOR: Okay. Rebecca here.  
8 Just looking at Board staff. Are there any questions  
9 from Board staff on Mill Pond?

10 MS. TYREE MULLANEY: Hi. It's Tyree,  
11 Board staff. I have a question about the amount of  
12 flow that the channel can handle between Mill Pond and  
13 Hambone Lake.

14 MR. JOEL GOWMAN: So Joel Gowman, with  
15 INAC. Our -- our drainage pathways and overall TCA  
16 design itself were modelled by AECOM with support from  
17 another consulting company called O'Kane Consulting  
18 (phonetic). So they look at the erosion potential of  
19 all aspects within the tailings containment area,  
20 including the discharge channel.

21 So initially I believe the models were  
22 run with a twenty (20) or fifty (50) year storm,  
23 maximum storm prediction. Some of the more sensitive  
24 areas -- the discharge channel from -- or the spillway  
25 from the diversion channel to Hambone and the -- the



1 channel between Mill Pond and Upper Pond -- were --  
2 the storm freque -- or the -- the storm intensity was  
3 increased from a twenty (20) to fifty (50) year  
4 maximum storm intensity to I believe a hundred (100)  
5 year storm intensity.

6                   So we anticipate that we're being quite  
7 conservative at the robustness of the overall design  
8 to be able to handle fairly significant peak -- peak  
9 flow intensities.

10                   Does that answer your questions?

11                   MR. MURRAY SOMERS:    Yeah, Murray  
12 Somers here, from INAC.  And just -- just to add one  
13 (1) little bit more -- a bit more detail is the --  
14 yeah, like he -- or like Joel said, they're being  
15 designed to handle the volume, right?  But in addition  
16 to volume, there's erosion risk and what-not, right?

17                   And just so it's -- it's not clear in  
18 everybody's mind till you actually go out to the site  
19 and see how little relief there is.  The -- the  
20 distance -- the drainage distance between Mill Pond  
21 and Hambone Lake is approximately 2 kilometres.

22                   And along that 2 kilometres, the -- the  
23 slope is about .2 percent of a grade.  So it's -- it's  
24 almost flat.  So just to -- to give you a sense of the  
25 amount of flow or the rate of flow that you'd see

1 would be pretty minimal going through there in the  
2 long term.

3 MR. JOEL GOWMAN: And just one (1)  
4 further clarification. In those sensitive locations,  
5 in the spillways and within the focussed flow within  
6 the -- the diversion channel itself, those -- those  
7 particular areas are lined with geotextile and then  
8 capped with Type E/F erosion-resistant material so.

9 MS. TYREE MULLANEY: Okay. Tyree,  
10 with -- with the Board.

11 Are there any contingencies in place  
12 if, say, you get a hundred (100) year storm, that --  
13 that discharge channel can't handle that flow?

14 MR. JOEL GOWMAN: I guess in the event  
15 that there was a major storm event in the area, we do  
16 have some contingencies as far as timely repair of the  
17 overall structure.

18 Part of our Phase II-B specifications  
19 is for strategic placement of -- of the various  
20 construction materials that we used to construct the  
21 TCA cover. So in the event that there needed to be  
22 additional -- or needed to be some repairs to the --  
23 to the constructed design, we would be able to repair  
24 it in a timely fashion.

25 And as Murray mentioned, the overall

1 design grade is extremely flat. It's actually been  
2 one (1) of our challenges is just to maintain --  
3 maintain flow across the site to avoid ponding with  
4 such a shallow grade over a fairly large distance.  
5 That's been more of the challenge than high-flow  
6 velocities.

7 MR. MURRAY SOMERS: Yeah, it's Murray  
8 Somers here, with INAC. And Joel just brought up a  
9 good point there that, yeah, the challenge has been to  
10 prevent ponding, you know. So -- so -- because it was  
11 such a shallow grade. And -- and it's going to be  
12 pretty unlikely that we're not going to have water  
13 sitting in these channels, right? There's such --  
14 such a low grade.

15 So I just want that to be the -- to  
16 make sure everybody is aware of that. You know,  
17 there's not much you can do about it. These were  
18 former ponds. You know, one (1) was a former lake or  
19 a former pond that the water's going to be draining  
20 through. So they naturally want to hold some water.

21 We'll be doing some backfilling and  
22 what-not to -- to make sure there's not an excessive  
23 amount of ponding or what-not, but -- but there --  
24 there could be some ponding. You know, it's -- it's  
25 expected.

1                   MR. JOEL GOWMAN:    And Joel, with INAC.  
2    One (1) other consideration is -- is there are areas  
3    within the overall drainage catchment that, if we were  
4    to experience some high-flow volumes, there would be  
5    areas such as the existing catchment within Upper Pond  
6    that, as that water level came up, there'd been some -  
7    - some retention within Upper Pond during high-flow  
8    periods.

9                   MS. TYREE MULLANEY:    Okay. Tyree,  
10   with the Board.

11                   Keeping with the discharge channel, and  
12   I'm thinking SNPs, would you see a benefit to having  
13   SNP at the outlet of Mill Pond and somewhere along the  
14   discharge channel prior to going into Hambone Lake,  
15   just to monitor the water quality coming out of  
16   Hambone through the site and then eventually out?

17                   MR. JOEL GOWMAN:    I think it'd be  
18   something that would be worth considering. Part of  
19   our water balance and the geochemistry studies that  
20   are being completed this summer should feed into some  
21   suggestions that CARD as the proponent might -- might  
22   have to provide back to the Board on that topic for  
23   specific locations as we move forward to a more  
24   longer-term monitoring plan.

25

1 (BRIEF PAUSE)

2

3 THE FACILITATOR: Okay. Rebecca  
4 Chouinard, with the Board. We are right on schedule.  
5 It's now 10:30, and we are scheduled to break, drink  
6 coffee, and eat snacks. So we should do that, and we  
7 will meet back at 10:45.

8

9 --- Upon recessing at 10:30 a.m.

10 --- Upon resuming

11

12 THE FACILITATOR: Okay. I think we're  
13 all here. I just want to do a quick check in with --  
14 on the phone line. Morag, are you there?

15 MS. MORAG MCPHERSON (BY PHONE): Yeah.  
16 It's Morag, here with DFO. I'm on.

17 THE FACILITATOR: Okay. Perfect.  
18 Then we'll get started on our next topic, which is  
19 water quality. And again, I will turn the floor over  
20 to Murray for this presentation.

21

22 PRESENTATION ON WATER QUALITY BY INAC/CARD

23 MR. MURRAY SOMERS: Murray Somers,  
24 here with INAC. Page number? So we are on page  
25 number 32 for anybody who's on the phone. Yeah, so

1 effluent quality, because that's what I focus on in  
2 this section. I believe that's really ultimately what  
3 we were -- what we were talking about, right, and --  
4 and how we come up with these numbers.

5                   So a lot of this, I'll be honest, was  
6 basically just copied over from -- from how they were  
7 originally derived, because we're not proposing to  
8 change anything, right. So -- so the format of the  
9 slides might look a little different. It might --  
10 because I borrowed them, but -- but that's quite all  
11 right.

12                   So remedial approach to deal with the  
13 water yet treat and discharge the arsenic-impacted  
14 tailings water and discharge them into Hambone Lake,  
15 which is the only sour -- or the only place we're  
16 allowed to discharge.

17                   The water treatment method, this is  
18 what we followed, was iron co-precipitation. This is  
19 what we still use onsite right now. Widely employed  
20 at mine sites for arsenic removal, and has worked very  
21 successfully for us since we started it in 2010, I  
22 think was the first year we -- we treated.

23                   And like I said, it'll be discharged to  
24 Hambone Lake. We'll continue to do so. And the  
25 compliance point is and will continue to be the end of

1 pipe for effluent discharge.

2                   So the selection of the criteria for  
3 the discharge, how -- how it came to be, there was  
4 three (3) main things that we looked at. The 2008  
5 HHERA, it assessed the effects of various effluent  
6 discharge scenarios. So I'll be showing a slide here  
7 shortly that will break those scenarios down a little  
8 bit.

9                   It's kind of a cliff note version of  
10 the scenarios. They model a lot, but essentially, I  
11 believe there was a one (1), a two (2), a three (3), a  
12 four (4) year discharge scenario to do that initial  
13 1.2 million cubic metres of impacted water.

14                   And then also at various arsenic  
15 concentrations as well. So discharging at -- at .02  
16 micrograms per litre, or -- or -- no, 2 micrograms per  
17 litre, or 5 micrograms per litre, or fifty (50), or  
18 five hundred (500), or one point six (1.6), you know,  
19 like -- so there's a lot of various scenarios that  
20 they ran.

21                   So it also incorporated input, the  
22 HHERA did, of seepage inputs from the TCA. So at the  
23 time when that was done the tailings containment area  
24 was full of water, 1.2 million cubes, and so there  
25 were some weaker spots in the dam that was there, and

1 there was a lot of seepage at that point.

2 Right now as you saw from the previous  
3 slides, it's mostly dry so we're not dealing with  
4 seepage very much anymore, but at the time that was  
5 definitely an input. So the HHERA modelled the  
6 discharge from the treatment plant, also incorporated  
7 any other inputs into Hambone Lake from seepage, and  
8 assessed the effects of long-term arsenic loadings  
9 post-remediation.

10 Second, we analysed performance of data  
11 for plants using the Best Available Technology. So  
12 the co-per -- the iron co-precipitation technique,  
13 based on the expected performance what can we expect.  
14 And we also looked -- or spoke to some experts on the  
15 -- the subject.

16 The HHERA for Hambone Lake found that  
17 several species are potentially at risk in Hambone due  
18 to pre-existing baseline conditions, which we talked  
19 about earlier this morning. None of the treated  
20 effluent discharge alternatives, so none of the  
21 scenarios that were modelled would have a substantive  
22 negative effect on the current conditions in Hambone  
23 Lake, all right. So because of pre-mining impacts  
24 we're not going to be adding much of an impact -- a  
25 noticeable impact to Hambone Lake through water



1 treatment.

2 Powder Mag and Sandy are a little  
3 different though, because they were less impacted by -  
4 - by mining activities. So none of the treated  
5 effluent discharge scenarios with arsenic levels at .2  
6 milligrams per litre or less under a two (2) year --  
7 two (2) year discharge were predicted to pose risks to  
8 aquatic species. That's essentially -- the two (2)  
9 year was what was proposed by the previous contractor.  
10 It didn't pan out.

11 And while phytoplankton might be  
12 affected temporarily in Powder Mag, the overall risk  
13 is judged to be low as the arsenic levels recover  
14 quickly. And really, only sensitive species of  
15 phytoplankton would be possibly affected. And our  
16 monitoring indicates that that's exactly what  
17 happened, right.

18 So here's this cliff's note that I was  
19 mentioning before. So we've got the -- the lakes  
20 going downstream. Hambone Lake was the -- the  
21 discharge point, Powder Mag Lake the following, Sandy  
22 Lake, then Whale Tail Lake, and then you're pretty  
23 much off site at that point in time. Oh, Whale Tail  
24 Lake is off site actually.

25 And then obviously the various

1 concentrations of arsenic, this is specific to  
2 arsenic, that effluent could be, so they ran all these  
3 various scenarios and -- and they landed in -- in this  
4 area. So they mostly modelled for point two (.2).

5                   That -- that's where we -- we -- that's  
6 where the HHERA did most of the modelling and -- and  
7 recommendations and we settle on point five (.5)  
8 simply due to the -- the fact that we weren't -- we  
9 didn't know quite what to expect with -- with the  
10 technology available. We didn't know if there would  
11 be any northern, or -- or this -- because it was such  
12 a condensed season we didn't know if we were going to  
13 be able to achieve this point two (.2).

14                   And to be honest, I just recall,  
15 actually I should have put into the sli -- or put a  
16 slide in here was we did treat some water in 2009 and  
17 there was quite a few exceedences then of that point  
18 two (.2), right. So I believe it even when up to  
19 point four (.4) or point four (.4) plus. And -- and  
20 that was another reason why we were nervous to settle  
21 on -- on a point two (.2) level.

22                   So best available technology, so we  
23 analyzed data from full scale plants. These co-  
24 precipitation plants located at other operating mines,  
25 the results had indicated that these plants could meet

1 point two (.2) on an annual average basis, but not on  
2 a monthly basis. I don't know the details of what we  
3 looked at, but that's -- but what came out of it.

4           The plant at Tundra, it does use the  
5 same technology or similar technology. We -- however,  
6 we were worried that we would encounter some -- like I  
7 just mentioned, some -- some other conditions, or  
8 impairments that could prevent us from meeting that  
9 point two (.2), shorter operational season, remote  
10 location.

11           In all honesty, we've done really quite  
12 a good job at maintaining it below that point two (.2)  
13 level even though we're authorized for point five  
14 (.5), but some additional challenges that we see  
15 potentially coming up is as we get to the tail end,  
16 the final year of water treatment you -- you run into  
17 an issue where in previous years you don't have to  
18 treat until you've got no water left.

19           You can -- when the dams are still in  
20 place you can treat down to a level that's,  
21 essentially, safe enough so that the next year's  
22 freshet won't exceed the volume, the containment  
23 volume and spill over, right. So you just have to  
24 treat as much as you can, but once you get low and --  
25 and once you've got like another 10 or 20,000 cubes

1 left you can stop, because you still -- the dams are  
2 still there and -- and you don't need the entire area  
3 to be -- to be dry.

4                   But in the final year you need it all  
5 to be dry, so you're going to suck right to the  
6 bottom, right. So that's going to be your heaviest  
7 sediment load. So the muddiest water is going to be  
8 coming in at that point in time. So that's going to  
9 be the -- actually the most difficult water, probably,  
10 to treat.

11                   Another challenge that we could be  
12 facing is thus far the Water Treatment Program has  
13 been completed by -- we've had two (2) different  
14 contractors do it, but prim -- primarily by one (1).  
15 And with the new tender going out we can't guarantee  
16 it's going to be the same contractor doing the water  
17 treatment work. So -- so that could be another  
18 potential consideration to make and -- and why we're -  
19 - we don't think we need to flex much on that point  
20 five (.5) that we're permitted at right now.

21                   So -- and here is the arsenic  
22 concentration that we're currently permitted to  
23 discharge. We've got a monthly average of .5  
24 milligrams per litre and a maximum grab of one (1).  
25 Like I said, we have never had any exceedences of the

1 point five (.5) throughout the time that we've been  
2 operating. I don't anticipate that we'll have any in  
3 the future, but -- but yeah, so we're -- we're happy  
4 with this.

5                   Short-term risks are present at a  
6 discharge of point five (.5), but anticipated that  
7 downstream lakes will recover over the long term and  
8 that water treatment con -- yeah, that's one (1) nice  
9 thing to -- to point out is that the contract itself  
10 actually motivates the contractor to reach point two  
11 (.2) even though regulatory wise we're permitted to --  
12 or licensed to have a .5 milligram per litre  
13 concentration on an average month.

14                   We actually write into the contracts  
15 that -- that they need to meet point two (.2), all  
16 right. So -- so we've got a .3 essentially milligram  
17 per litre kind of buffer zone there, all right. So --  
18 so we should never come close to that, but it's there  
19 just in case for the reasons that I just mentioned,  
20 that we're going to be treating the dirtiest water at  
21 the end and -- and the -- the new -- if there's a new  
22 contractor they might not be as experienced.

23                   So that's how we came up with those  
24 values. Yeah, they -- we -- we'd like to keep them  
25 there, but I guess we'll open it up for -- for

1 questions.

2

3 QUESTION PERIOD

4 THE FACILITATOR: It's Rebecca  
5 Chouinard, with the Board. Thank you, Murray, for  
6 that. From our online review system -- review comment  
7 table we had some comments or questions on water  
8 quality from ENR and MVLWB staff. So perhaps I'll  
9 turn the floor over to ENR first.

10 MR. RICK WALBOURNE: Rick Walbourne,  
11 ENR. Murray, thanks for that presentation.

12 Yeah, we did have one (1) comment on  
13 the ORS conversation that was happening in '09  
14 actually as well regarding the -- the point two (.2)  
15 from the HHERA and the point five (.5), I think, which  
16 is similar to what we see in -- in the MMER  
17 (phonetic).

18 I spoke to Murray a -- a couple times,  
19 I think, about this during the review period. And --  
20 and we do understand that they have conditions with  
21 the contractor to -- to attempt to meet zero point two  
22 (.2). And as -- as Murray pointed out here again in  
23 the presentation, they're going to be dealing with  
24 some -- some, I guess, dirtier sediment-laden water as  
25 -- as they near the end of the discharge period.

1                   And we also took into account the --  
2 the quantities we're dealing with her now as opposed  
3 to -- to 2009 are significantly lower. As such, we're  
4 satisfied with the response that's been provided by  
5 CARD today and through the ORS. So, ENR has no  
6 further -- no further comment regarding EQCs. Thank  
7 you.

8                   THE FACILITATOR:    Okay. Great.  
9 Rebecca, here with the Board. I'll turn the floor  
10 over to Board staff just to go over the questions and  
11 comments that they had during the review.

12                   MS. HEATHER SCOTT:   Hi. It's Heather  
13 Scott, from the Board. So following up on our  
14 questions and recommendations on the ORS, and also in  
15 reviewing the transcripts from the 2009 licence  
16 issuance, CARD did make some commitments to -- towards  
17 monitoring downstream of the water treatment facility  
18 effluent.

19                   And I'm wondering if you could comment  
20 on how the water quality downstream of the discharge  
21 has -- has looked, or what does water quality look  
22 like? Is it as you predicted based on the HHERA and  
23 other -- other models that CARD has completed?

24

25

(BRIEF PAUSE)

1 THE FACILITATOR: Just as our INAC-  
2 CARD folks are discussing, I'm just doing a quick  
3 phone check. Morag, are you still on the line, or did  
4 we lose you?

5

6 (BRIEF PAUSE)

7

8 MR. MURRAY SOMERS: Murray Somers,  
9 with INAC. Thanks for the question.

10 Yeah, I feel like that's something I  
11 should know off the top of my head, but -- but to be  
12 honest, every year we produce a -- an annual Water  
13 Quality Monitoring Report, right, which -- which  
14 compares one (1) year to the next. And actually, not  
15 one (1) year to the next, but all years to the current  
16 year is what it is, and -- all years of water  
17 treatment anyway.

18 And -- and so all those trends are  
19 identified in all the downstream lakes in that  
20 document. I know we haven't had any -- any hits or  
21 any -- any like reasons to believe there's any -- any  
22 concerns downstream. Everything has been kind of  
23 steady and -- and as predicted, as far as I recall.

24 But -- but I have to review that report  
25 again to -- like the -- the most recent one, the 2015



1 report to -- to give you specifics on that.

2 MS. HEATHER SCOTT: It's Heather  
3 Scott, with the Board. Maybe we'll make that another  
4 Information Request. And to be honest yet, we're  
5 working on a short timeline, so we haven't gone  
6 through the annual reports either with a fine-tooth  
7 comb.

8 But I think what's typical in a Type A  
9 water licensing process is providing that background  
10 water quality data if you have it to -- to justify  
11 whatever effluent quality criteria you propose, and --  
12 because in this scenario we do have that data where if  
13 you didn't in the 2009 process it would be prudent to  
14 do so. Thanks.

15 MR. JOEL GOWMAN: So Murray and I did  
16 discuss the historical data and our performance in  
17 meeting those -- sorry, It's Joel Gowman, with INAC.  
18 We did discuss our performance meeting those  
19 objectives and as Murray has mentioned, we've been  
20 able to quite consistently achieve the point two (.2).

21 But given the -- the variable nature of  
22 our feed stock and the fact that our overall catchment  
23 has experienced some changes in its chemical makeup,  
24 that we'll be trying to get a better understanding on  
25 -- through the geochemistry studies that we're

1 completing this summer.

2                   That's the primary reason that we're  
3 requesting that the criteria remain at the same --  
4 same levels and gives our plant the -- the best option  
5 -- or the best stability to meet -- meet that -- that  
6 criteria consistently throughout the remaining  
7 treatment periods.

8                   But we can take and review the trends  
9 and provide that information to the Board.

10                   THE FACILITATOR:    Rebecca Chouinard,  
11 with the Board.  I -- I think it would be helpful in  
12 addition to just providing that report just perhaps a  
13 -- a little bit of background on the rationale on why  
14 that data supports your proposed EQC to remain the  
15 same.

16                   So if you could just, you know,  
17 evaluate that data a little bit and just say that it  
18 supports what you're suggesting if it does.

19                   MR. JOEL GOWMAN:    Joel Gowman, with  
20 CARD.  Yeah, we'll provide a bit of a discussion on  
21 that.

22

23 --- INFORMATION REQUEST NO. 2:

24   SNP for decommissioning.

25   Provide surveillance

1 network program stations  
2 with associated effluent  
3 quality criteria, if  
4 applicable, with  
5 supporting evidence and  
6 rationale to ensure  
7 ongoing protection of the  
8 environment following  
9 decommissioning, including  
10 testing requirements,  
11 sampling frequencies and  
12 parameters and activation  
13 triggers.

14  
15 MS. TYREE MULLANEY: Okay. This is  
16 Tyree, with the Board. Just a quick followup  
17 question. I know it's going to be a far-reaching  
18 question.

19 Once the water treatment facility is  
20 turned off, where would INAC-CARD like the compliance  
21 point to be knowing the status of Hambone Lake?

22 MR. MURRAY SOMERS: Yeah, Murray  
23 Somers, here with INAC. In the -- the first  
24 presentation I put up there I had given you the -- the  
25 big overview of -- of the rest of the project there.

1 I -- I had brought -- or I had mentioned that -- that  
2 the original HHERA, the 2008 version had indicated,  
3 yeah, that Hambone post-remediation at any point  
4 really is unlikely to be able to -- to meet any CCME  
5 guidelines.

6                   And then the next -- next lake down  
7 would be Powder Mag Lake has indicated potentials for  
8 occasional exceedences, likely freshet exceedences or  
9 something like that, more high -- highly erosional  
10 kind of prone seasons would -- would likely have some  
11 potentials anyway for -- for exceedences on a CCME  
12 guideline.

13                   But unlikely that downstream of that we  
14 would see much of anything for hits. So -- so based  
15 on that, if the new HHERA confirms that, that's --  
16 that's actually what's happening. That's still an  
17 accurate prediction. Then -- at this point in time I  
18 think we would like to see Sandy Lake as a compliance  
19 point if it's determined through a consultation with  
20 HHJs anyway that -- that CCME is an appropriate  
21 application.

22                   MS. HEATHER SCOTT:     It's Heather  
23 Scott, with the Board. Can you confirm inlet/outlet  
24 Sandy Lake as the proposed point?

25                   MR. MURRAY SOMERS:     I think -- sorry,

1 it's Murray Somers, with CARD. I think that might  
2 depend on the outcome of the new 2016 HHERA.

3 THE FACILITATOR: It's Rebecca  
4 Chouinard, here with the Board.

5 Just to followup, just a point of  
6 clarification on -- on why we're asking these  
7 questions is in drafting this water licence, you know,  
8 our thinking up until 2016, '17, '18 status quo,  
9 that's one (1) thing, but looking into the -- the sort  
10 of five (5) year monitoring, you know, post-closure  
11 scenario, where -- what should be -- we be actually  
12 writing into the licence at this point with --  
13 avoiding ame -- another amendment down the line when  
14 we get the results from --

15 MR. MURRAY SOMERS: M-hm.

16 THE FACILITATOR: -- from those  
17 studies. So I guess that's -- that's where we're  
18 coming from is from drafting the licence at this point  
19 in time, any recommendations on -- on how to do that,  
20 or -- or your rationale for what and where.

21 MR. JOEL GOWMAN: Joel Gowman, with  
22 INAC. I appreciate the Board's interest in including  
23 post-remediation compliance points in this discussion.  
24 It -- resolution or greater clarity on this particular  
25 aspect gives our project a better opportunity to set -

1 - make any -- any design tweaks that we need to to  
2 ensure that we maintain compliance with that longer  
3 term and that we're setting achievable objectives for  
4 the -- for this Crown project.

5                   So as Murray said, our current  
6 information indicates that compliance should be  
7 achievable at the inlet of Sandy Lake, but it would  
8 depend, I guess, on -- we'd -- we'd like the  
9 opportunity to use the data that we're gathering from  
10 the 2016 risk assessment to determine whether or not  
11 we would suggest going with inlet versus outlet of  
12 Sandy and exactly which criteria would be relevant for  
13 that compliance point.

14                   MR. MURRAY SOMERS: Murray Somers,  
15 with CARD. If the Board needs a station right now, or  
16 location to -- to draft the water licence, I would --  
17 I would think like to be a little bit protective of --  
18 of CARD, conservative from our point, the further the  
19 outflow would be the -- the more conservative right  
20 now, which is Station 14-6H in the current SNP.

21                   But both those stations just happen to  
22 be walking distance from the airstrip, which would be  
23 very convenient for a long-term monitoring  
24 perspective.

25                   MS. HEATHER SCOTT: It's Heather

1 Scott, with the Board. So just to be clear, once we  
2 issue the licence, generally, the Board is able to  
3 make changes to the SNP, but the Board is not able to  
4 make changes to the conditions or the EQC post-  
5 issuance without an amendment.

6                   So, I think we're in a bit of a  
7 conundrum where it seems as though you would like to  
8 be informed by a -- a study that won't be completed  
9 for another year or so in terms of recommending  
10 effluent criteria, but we need to set that criteria  
11 now to avoid the amendment.

12                   MR. JOEL GOWMAN: And given the -- the  
13 fact -- sorry, Joel Gowman, with INAC.

14                   Given the fact that the Board has  
15 interest in -- in setting that compliance point within  
16 this existing water lic -- or within the new  
17 authorizations that are being discussed here today, we  
18 can talk with our consultants and see if we can work  
19 up specific aspects of that report in advance.

20                   And then perhaps we can work with our -  
21 - with our regulatory officer with the Board to feed  
22 some of that information into the process. If there's  
23 a -- if there's some target dates that we can work  
24 with the Board to provide updated information, we'd --  
25 we'd like the opportunity to make sure that we're

1 providing the most current data possible in order to  
2 meet -- or work within your timelines that you're  
3 accommodating us on here.

4                   So, we appreciate that opportunity for  
5 some further discussion.

6                   THE FACILITATOR:    Rebecca Chouinard,  
7 with the Board.  I think that would be a really  
8 helpful conversation to have and to dig a little bit  
9 deeper into those issues.  I think it will provide a  
10 lot more clarity going through the following stages of  
11 -- of this renewal.

12                   And I'm just looking at the upcoming  
13 dates here.  July 5th we've got written interventions  
14 due, so we definitely would like to have some  
15 information on the table prior to that.  Our  
16 Information Requests are due from this session on June  
17 28th.

18                   I'm wondering if we might take  
19 advantage of the next break and sit down and -- and  
20 maybe talk about a -- a timeline for getting that  
21 additional information in so we could probably better  
22 clarify what it is that we -- would be helpful for us  
23 moving forward and discuss how long that would take  
24 from your end.

25                   And before the end of the day,



1 formalize that as an Information Request. That might  
2 have a slightly delayed timeline or a deadline if --  
3 if possible. We are quite tight on time between now  
4 and July 5th and we definitely want that information  
5 to give other reviewers the opportunity to comment on  
6 it as part of their interventions.

7                   But perhaps we can take this  
8 conversation, just to hammer out some of the logistics  
9 and the wording of that Information Request, and  
10 formalize it at the next break.

11

12 --- INFORMATION REQUEST NO. 3:

13                   Sewage discharge. INAC-  
14                   CARD to recommend  
15                   surveillance network  
16                   program station locations,  
17                   testing requirements,  
18                   sampling frequencies and  
19                   parameters, activation  
20                   triggers and discharge  
21                   criteria for sewage  
22                   discharge from the sewage  
23                   treatment facility, if  
24                   needed, as a contingency  
25                   measure.

1

2 MR. JOEL GOWMAN: Joel Gowman, with  
3 INAC. That -- that approach sounds good.

4 And once we've clarified the -- the  
5 question and some of the -- the dates within the Board  
6 review system, we can direct our consultants to  
7 prepare a bit more of a targeted new deliverable for  
8 that specific question. Thank you.

9 MS. HEATHER SCOTT: It's Heather  
10 Scott, with the Board.

11 So along those same lines in terms of,  
12 I guess, baseline data for Sandy Lake, I -- I assume  
13 there's lots of it out there, you've been collecting  
14 it for years, and -- and be comfortable using that  
15 data towards your recommended effluent criteria?

16 MR. JOEL GOWMAN: Joel Gowman, with  
17 INAC. Yes, we've got a fairly extensive data set  
18 from, I think, over the last eight (8), ten (10) years  
19 on a lot of the lakes within our drainage system. We  
20 can make some -- have our consultant make some  
21 recommendations based on the historical data set and  
22 get back to the Board on that.

23 We will continue on with the more  
24 formal HHERA process just for our own internal  
25 governance and to provide information once that's

1 formalized as well. But we appreciate the opportunity  
2 to provide some further input into the Board's  
3 decisions on this topic.

4 MS. HEATHER SCOTT: It's Heather  
5 Scott, with the Board. And one (1) more, so you have  
6 a hydrology station on Sandy Lake and what kind of  
7 data is that station collecting?

8 MR. MURRAY SOMERS: Murray Somers,  
9 with the Board (sic). Yeah, the hydrology station  
10 there, it -- it measures lake elevation, right, so  
11 water level elevation and it gets monitored --  
12 monitored annually.

13 THE FACILITATOR: Sorry, Rebecca here.  
14 We just had chuckled. You said, "Murray Somers, with  
15 the Board," I think. We're rubbing off on you.

16 MR. MURRAY SOMERS: Murray Somers, my  
17 apologies.

18

19 (BRIEF PAUSE)

20

21 THE FACILITATOR: Okay. Rebecca here.  
22 If there's -- is there any other questions, comments  
23 from Fisheries and Oceans?

24 MS. MORAG MCPHERSON (BY PHONE): It's  
25 Morag McPherson, here with Fisheries and Oceans.

1                   No, we don't have any questions in  
2 regards to the -- the water quality at this point.  
3 Thanks.

4                   THE FACILITATOR:    Okay.   Great.  
5 Anything else in the room?   Okay.

6                   Then we can move on to the next topic,  
7 which is the re-submission of management plans and  
8 reports.   So I'll turn the floor over to Murray for a  
9 short presentation on this.

10

11 PRESENTATION ON RE-SUBMISSION OF MANAGEMENT PLANS AND  
12 REPORTS INAC-CARD

13                   MR. MURRAY SOMERS:    Thanks.   Murray  
14 Somers, with INAC, and this one (1) will be short,  
15 absolutely so.   That's a busy slide.   For Morag on the  
16 phone, we are on slide 39.

17                   These are the list of management plans  
18 or reports required currently under our current water  
19 licence and land use permit.   I believe there's  
20 nineteen (19) there in total, seventeen (17) of which  
21 have been submitted and approved already.

22                   The first two (2) at the top, the  
23 Reclamation Plan and the Status of Environment Plan  
24 have not been approved, according to that, which is  
25 true, because they've never been submitted.   We have

1 int -- interim Status Environment Reports submitted,  
2 but when that condition was written in it was required  
3 to be submitted in February 2016, expecting  
4 remediation to be complete at that point in time,  
5 which it's not.

6           So -- so I provided in February a -- an  
7 interim Status of Environment Report with commitment  
8 to do an actual post-remediation Status of Environment  
9 Report following remediation under the new water  
10 licence. So that's why that one (1) has a not  
11 applicable yet.

12           And Reclamation Plan, that was specific  
13 -- or is specific to roads and drainages onsite, so  
14 essentially how we're going to reclaim the roads and -  
15 - and deal with the -- the bridges, there's two (2)  
16 bridges. So that's -- that's what that applies to,  
17 but it's required ninety (90) days before we do any of  
18 that reclamation work, which we haven't gotten to yet,  
19 so the plan hasn't been finalized. Okay.

20           So that's -- that's why these two (2)  
21 were never submitted and won't be submitted under the  
22 -- the current water licence. They'll be deferred.  
23 Everything else has been submitted there and approved.  
24 Is there any questions -- oh, we'll get to questions,  
25 I guess, on this.

1                   I won't read them all unless you want -  
2 - does anybody want me to read -- no, I didn't think  
3 so. So, yeah, seventeen (17) management plans and  
4 reports were approved. We have had a design change to  
5 the land form on the TCA earth cover.

6                   So the tailings containment area has a  
7 liner, a bituminous liner. On top of that to protect  
8 the liner we have an earth cover, all right. It's  
9 gone through a couple of iterations and design.  
10 Originally it was intended to be flat and then in 2012  
11 had the great idea to actually create some land forms  
12 to -- to manage the flow off of the cap, which makes  
13 sense.

14                   But it was revised again last year, or  
15 semi-recently anyway, to distribute the flow, because  
16 the 2012 design actually focussed the flow into one  
17 (1) drainage point off of the cap, which required a  
18 lot more rip-rap material, more armoury, and the new  
19 one is more distributive, all right.

20                   So -- so I think there's five (5)  
21 channels now flowing off -- off the cap, so -- so your  
22 rows of flows will be a lot less, or highly reduced.  
23 So that prompted that.

24                   So, I think I just explained all what's  
25 on the slide there. Oh, yeah, and the bonus for doing

1 that, so it reduce -- reduces the flows and required  
2 volumes. So we don't need as much rip-rap. And the  
3 bonus to that was the riprap material, we call it Type  
4 EF, just a size range, it all came from the west lower  
5 pond borrow area.

6                   And with the reduction in need for that  
7 amount of material on the cap, the bonus is that the  
8 footprint for the west lower pond borrow area will be  
9 approximately half, and -- which is great, really  
10 great, actually.

11                   So that was a nice bonus when -- when  
12 we re-looked at those designs and -- and came out with  
13 a new one. That's what we've been doing with  
14 ourselves during this care and maintenance period.

15                   Now, there is, as I mentioned the two  
16 (2) outstanding reports. I won't go into those again.  
17 Oh, maybe I'll talk about the Status of Environment  
18 Report. We are proposing an eighteen (18) month  
19 period following Phase II Remediation, so likely  
20 around 2020.

21                   Again, reasons whys -- why, eighteen  
22 (18) months will provide sufficient time to  
23 incorporate the final remediation year's water quality  
24 monitoring results, as well as the post-remediation  
25 aquatic monitoring findings. Okay. So if it was done

1 any earlier than that you might not get a true status  
2 of environment post-remediation,

3 All right. So -- so we figure eighteen  
4 (18) months will -- will give us the appropriate  
5 timeline to get a true status of environment post-  
6 remediation. And that report once complete and  
7 submitted, it'll be used to refine the SNP Program  
8 during the adaptive management phase and the long-term  
9 management phase.

10 But yeah, ultimately our scope has not  
11 changed. There's nothing new in -- in the new  
12 applications that -- that really differs from the  
13 previous application and the amendment application.  
14 The -- the scope's all the same. There's no new work  
15 activities, all within the same area, all triggers are  
16 equal.

17 Yeah, so -- so ultimately we don't  
18 really see much of a need to revise any plans. I did  
19 mention, however, that the -- the construction -- or  
20 the TCA Construction Design Report was -- we changed  
21 the design. When -- when I submitted -- when we  
22 submitted our application, we did provide a revised  
23 TCA Construction Design Report to -- to echo those  
24 changes that we've made.

25 The only thing that wasn't included in



1 that at the time were the engineer drawings, the issue  
2 for construction engineer drawings. Reason being is  
3 that until we actually tender, put our -- put our --  
4 our new contract -- new remediation contract out for  
5 tender we can't divulge those drawings, okay, just as  
6 part of a fair and equitable process for Government of  
7 Canada contracting, all right.

8                   So we can't. If we put them out there  
9 and one (1) group saw them and another group didn't,  
10 they would have an advantage, all right. So we had to  
11 hold -- hold on to those for the time being. But if  
12 the Board requires those drawings then we'll provide  
13 them once they're posted for the tender. And that's  
14 it.

15                   THE FACILITATOR: Okay. Rebecca, here  
16 with the Board. Thank you for that, Murray.

17                   So the -- the comments and questions on  
18 this section of the application were all from the  
19 Mackenzie Valley Land and Water Board Staff. But  
20 before I turn it over to staff, I just wanted to  
21 canvass the room to see if there's anybody else who  
22 has any questions on this topic before staff asks  
23 questions?

24

25 QUESTION PERIOD

1 MR. RICK WALBOURNE: Rick Walbourne,  
2 ENR. We have no questions on this topic. Thank you.

3 MS. MORAG MCPHERSON (BY PHONE): And  
4 Morag McPherson, with Fisheries and Oceans. We don't  
5 have any questions on the report section. Thank you.

6 THE FACILITATOR: Okay. Then I will  
7 turn it over to Board staff.

8 MS. HEATHER SCOTT: Hi, it's Heather  
9 Scott, with the Board. So I'll just start with the  
10 sewage disposal facility operation and maintenance  
11 plan, and this is just a very minor update that I  
12 think the Board would need to see.

13 I realize this has been approved under  
14 your current licence, but we are dealing with a new  
15 licence. And just the section, your contingency for  
16 fecal coliform removal as is brought up on the ORS, I  
17 just don't think Board staff can recommend to the  
18 Board to approve that.

19 Environment Canada brought up some  
20 valid points about adding -- the concentrations of  
21 chlorine that you would require to significantly  
22 reduce fecal coliform is -- is toxic and usually those  
23 practices are used with -- with a subsequent de-  
24 chlorination step when you're using wastewater  
25 treatment and that can't be performed onsite.

1                   So I think my recommendation would be  
2 and, as you say, this would ultimately be discharged  
3 to, I think, the TCA, if -- if discharge was ever  
4 required, so just simply your contingency could be to  
5 release that level of fecal coliform. Just a very  
6 small change.

7                   MR. JOEL GOWMAN:     Joel Gowman, with  
8 INAC. Just to clarify, Heather, are -- what is the  
9 Board's position then on what we should be proposing  
10 for a limit on fecal coliform?

11                   My -- my reason for inquiring a bit  
12 further is we've had challenges on other projects  
13 where we have limited options for treatment for  
14 effective treatment as the Board's alluding to here.  
15 And that we've developed our management plans based on  
16 a -- a discharge from the treatment facility where we  
17 have overland flow removed from potable water sources.

18                   So in addition to chlorination, a lot  
19 of the -- a lot of the data that's out there indicates  
20 that, like UV light exposure and whatnot is fairly  
21 effective at -- at addressing fecal coliform and other  
22 bacterial concentrations. So given that -- that our  
23 discharge locations from that facility are at quite a  
24 distance from any potable water sources in the area  
25 and that we're proposing discharge, like an overland

1 discharge, we're wondering if we could move away from  
2 setting a limit for fecal coliforms?

3 THE FACILITATOR: Rebecca Chouinard,  
4 with the Board. I just want to make a small point of  
5 clarification just in terminology. It's -- it's  
6 minor, but important. Just when we're responding,  
7 we're -- we're advised they're to the Board.

8 So when you ask, What will the Board  
9 do, it remains to be seen. We won't talk on behalf of  
10 the Board, but -- as advisors, what would Board staff  
11 -- what are our opinions.

12

13 (BRIEF PAUSE)

14

15 MS. HEATHER SCOTT: It's Heather  
16 Scott, with the Board. Just to clarify, from your  
17 response, you don't anticipate having to discharge  
18 from the sewage disposal facility? I can't remember  
19 exactly what you call it. The sewage disposal  
20 facility within the lifetime of the project.

21 MR. JOEL GOWMAN: Joel Gowman, with  
22 INAC. Yes, that's correct. We're not anticipating to  
23 have to discharge. So far during the last six (6) and  
24 a half years of operation we haven't had to discharge  
25 from that facility given the fact that it's a three

1 (3) cell system that doesn't -- the cells don't have a  
2 liner within them.

3                   So we have, I guess, filtration out  
4 through the -- the walls of the -- of the facility  
5 itself and we've never actually had a -- a need to  
6 discharge any residual from within the system itself.

7                   It -- the only potential concern we  
8 would have is at the end of a season if we've had a  
9 high camp occupancy as the L -- as the material within  
10 the facility berms start to freeze up, it could start  
11 to retain fluid later in the season.

12                   MR. MURRAY SOMERS: Murray Somers,  
13 with the Board (sic). Yeah, exactly what -- with the  
14 Board, why do I keep saying that, it's INAC. Murray  
15 Somers, with INAC. For the record, if I say 'the  
16 Board' I mean INAC.

17                   Yeah, exactly what Joel said. It's not  
18 anticipated, but -- but is possible, right. It hasn't  
19 in the past six (6) and a half years of -- of  
20 operation, unl -- unlikely over the next two (2), all  
21 right, but -- but it is possible.

22                   But even -- even if it did occur it's  
23 unlikely that it would be a -- a large discharge. We  
24 would just be bringing it back down to -- to necessary  
25 levels, but, yeah.

1 MS. HEATHER SCOTT: All right. It's  
2 Heather Scott, with the Board. Like -- like Rebecca  
3 said, I can't predict what the Board would and would  
4 not approve, but I can tell you for other sewage  
5 treatment in the territory the general Board  
6 recommendation, or Board decision is to set effluent  
7 quality criteria for any potential sewage discharge.

8 And I can say there have been  
9 occurrences where discharge criteria cannot be met and  
10 often it just requires working with the inspector for  
11 the best, I guess, alternative method for disposing of  
12 sewage. And I think my recommendation would be to --  
13 to have that as a contingency plan instead of dumping  
14 a whole load of chlorine.

15 And as you said, wetland -- or on land  
16 treatment is a really great way of reducing fecal  
17 coliform, and reducing BOD, and nutrients, and all  
18 that good stuff that's in sewage. So I -- I believe  
19 that's probably a better contingency plan. And --  
20 and, yeah, I -- I'm respectful of the fact that this  
21 is a very small discharge and a, you know, a small  
22 plan within your grand scheme of the remedial work  
23 going onsite.

24 But yeah, I just think in terms of what  
25 we can recommend to the Board, what I've just stated

1 would be a better plan of action and what I would  
2 recommend to INAC to propose.

3 MR. JOEL GOWMAN: Thank you, Heather.  
4 It's Joel, with INAC. I appreciate that  
5 clarification.

6 MS. TYREE MULLANEY: Okay. Tyree,  
7 with the Board. I have a quick question. Do you see  
8 the benefit of have ...

9

10 (BRIEF PAUSE)

11

12 THE FACILITATOR: Sorry, it's Rebecca,  
13 here. I just wanted to finish off this topic before  
14 we move on to any new ones and it sounds like Rick has  
15 a follow-up question just to that.

16 MR. RICK WALBOURNE: Rick Walbourne,  
17 ENR. I was just wondering if you could give us any  
18 indication of -- and this might have to be a -- an IR  
19 or an undertaking, regarding -- I understand it's  
20 filtration, but there could be -- at the end of the  
21 year, like you said, the berms or the -- the area  
22 could be frozen.

23 Do you have any -- an estimate of what  
24 kind of quantities and quality that -- of that water  
25 and what we might be looking at for a discharge?

1           And further to that, I'd like to get a  
2 general understanding of where that loc -- how far  
3 would that location be from the nearest water body,  
4 for instance? So quality, quantity of that discharge  
5 potentially and location from the nearest water body I  
6 guess are the three (3) questions I have on that.

7           And I understand if you might not have  
8 all that here in front of you.

9           MR. JOEL GOWMAN:   Joel Gowman, with  
10 INAC. Thanks, Rick, for that followup question.

11           So quantity, I guess, we do have some -  
12 - we have been provided with some of the -- the  
13 volumes within the -- each of the sewage cells within  
14 that three (3) cell system.

15           I believe that cell number 3 is around  
16 50 cubic metres. I -- we can definitely follow-up  
17 with -- with more information after this meeting.  
18 We've -- we've never had the requirement to discharge  
19 from that system, so we've never actually undertaken  
20 any testing to be able to have kind of historical data  
21 on what the water quality was in that area.

22           And I think the nearest down gradient  
23 water body would be Hambone Lake, which is roughly  
24 about a kilometre from -- from the sewage lagoons  
25 there.



1 MR. RICK WALBOURNE: Rick Walbourne,  
2 ENR. Thanks for that.

3 I was just trying to get a perspective  
4 on -- it seems like some small quantities and a -- and  
5 a fair distance from the nearest water body, but,  
6 yeah, like, I think Heather, Rebecca had mentioned  
7 that, you know, maybe some allowance for an ins -- I -  
8 - I think an EQC of some sort would still be required,  
9 but there definitely seems like some room for an  
10 inspector or the Board to make some approvals or -- or  
11 take a look at something if you guys got into a  
12 situation.

13 So, yeah, I -- I think there still  
14 needs to be some -- something in there regarding EQC,  
15 but, yeah, regarding testing, I think if you do need  
16 to discharge, obviously there should be some testing  
17 requirements. So, I think the Board should probably  
18 consider just making some condition that if it needs  
19 to be discharged, monitoring would be required. And  
20 then -- or testing, I guess, as opposed to monitoring,  
21 and then Board and/or inspector approval, whichever  
22 the Board seems more comfortable with.

23 But it's just my thoughts on that.  
24 Thank you.

25 MR. JOEL GOWMAN: Thanks, Rick. Joel,

1 with INAC. One (1) other point of clarification,  
2 Hambone Lake, as we discussed earlier on with Murray's  
3 previous slides, is indicated to be fairly impacted  
4 from historical operations.

5                   So even though that's our nearest  
6 receiving water body it would be unlikely that that  
7 should be considered a potential potable water source  
8 as well, so.

9                   MS. HEATHER SCOTT: It's Heather  
10 Scott, with the Board. And just following up with  
11 another comment I had on the ORS.

12                   So right now the licence is written  
13 such that there's effluent quality criteria for any  
14 potential sewage that's discharged. However, there  
15 isn't an SNP associated with it.

16                   And I think what we might do just to  
17 make sure all our bases is -- are covered is recommend  
18 an SNP if -- like if -- if there is discharge, just so  
19 we can have that validation of the sewage meeting a  
20 certain -- certain criteria and then some sort of  
21 condition. I believe we would recommend to the Board  
22 if the criteria isn't met to, you know, have some  
23 inspector discrepancy, or Board discrepancy on that  
24 matter.

25                   Again, I can only make these

1 recommendations and it ultimately will be the Board  
2 who decides.

3 MR. JOEL GOWMAN: Joel Gowman, with  
4 INAC. Thanks for that, Heather.

5 And one (1) other thing that INAC might  
6 request is we might evaluate potential discharge  
7 locations for kind of a stable discharge point,  
8 perhaps one (1) of the small wetlands that drain in  
9 through to the TCA, but outside of our current TCA  
10 structure, just to add some additional polishing  
11 through one (1) of the small wetlands neighbouring the  
12 TCA as a consideration.

13 But we'll maybe review that internally  
14 and provide some feedback to the Board advisors based  
15 on our team discussions on that if that's permissible?

16 MS. HEATHER SCOTT: It's Heather  
17 Scott, with the Board. That sounds good and I -- my  
18 recommendation would be that that seems in line with  
19 best available technology for sewage treatment in the  
20 north.

21

22 (BRIEF PAUSE)

23

24 THE FACILITATOR: Okay. Rebecca  
25 Chouinard, with the Board. Any more on sewage? It

1 looks like we're good. Okay.

2                   Sorry about cutting you off there,  
3 Tyree. I'll turn the floor back over to you for  
4 additional questions on this topic.

5                   MS. TYREE MULLANEY: Tyree, with the  
6 Board. I'm going to shift gears. I'm -- I don't want  
7 to talk about sewage.

8                   I want to talk about potential  
9 conditions for drafting a licence. Since we're in the  
10 Management Plan and Report section here, would you see  
11 the benefit of having a condition relating to the  
12 completion of each objective when it comes to the  
13 three (3) remedial objectives just to assist with  
14 gauging the proximity that your team is towards  
15 entering the adaptive management phase?

16                   MR. JOEL GOWMAN: Joel Gowman, with  
17 INAC. I would suggest that as part of our established  
18 annual reporting under the current water licence that  
19 -- that INAC-CARD could provide a -- a short section  
20 within our upcoming annual reports as to the current  
21 status of each of the objectives as we've set out  
22 under the remaining remedial work and the adaptive  
23 management phase of the project rather than having a  
24 specific deliverable associated with each of those  
25 phases.

1                   Recognizing, the fact that certain  
2 components of the remedial objectives will be  
3 accomplished at different stages of the overall  
4 schedule.

5                   MS. TYREE MULLANEY:   Tyree, with the  
6 Board.  Yeah, that -- I think I could work with  
7 drafting something along those lines.  I just wanted  
8 to see where -- where you guys sat on that.

9                   MR. JOEL GOWMAN:   Joel Gowman, with  
10 INAC.  I appreciate that, Tyree.

11                   We're at -- our current schedule for  
12 remediation sees us completing most of the remedial  
13 objectives within 2017.  However, our work is really  
14 dependent on a -- a very close sequencing of a number  
15 of tasks.

16                   So there's a potential for certain  
17 aspects of the work to be pushed to the following  
18 field season.  So we'd appreciate that flexibility for  
19 providing that more meaningful update to the Board on  
20 our transition between the overall objectives for the  
21 project.

22                   MS. HEATHER SCOTT:   Hi, it's Heather  
23 Scott, with the Board.  Just a question with respect  
24 to the TCA cap.

25                   I'm wondering if you could tell us your

1 timing and scheduling for, I guess there would be some  
2 sort of tendering process for that, when you think  
3 you'll get your design drawings and when the actual  
4 work will be done?

5 MR. JOEL GOWMAN: Joel Gowman, with  
6 INAC. Thanks for that, Heather.

7 So essentially, at this point our  
8 internal project team is working on finalizing our  
9 tender package, which includes the design  
10 specifications for the remain -- remaining work.

11 We're expecting those specifications to  
12 be finalized within the next month and tendering  
13 shortly after that. We're hoping to have -- have the  
14 project awarded before -- before the upcoming winter  
15 road season to allow our contractor to mobilize in  
16 over the 2017 winter road.

17 And -- sorry, I lost my train of  
18 thought as to -- could -- could you repeat the -- the  
19 last bit of your question there again, Heather?

20 MS. HEATHER SCOTT: When you'll  
21 receive design drawings from the con -- contractor,  
22 and I guess as well as -- as builds and then when the  
23 actual work will be completed?

24 MR. JOEL GOWMAN: Thank you there. As  
25 design drawings will be released with the tender

1 package, so that should be released later on this  
2 summer, so probably by July those design drawings  
3 should be released.

4           The work will be happening over the  
5 2017 winter -- or 2017 summer construction season. We  
6 expect that it should be completed by the end of that  
7 construction season. But, as I mentioned on the  
8 previous question, a lot of the work is dependent on  
9 some very tight sequencing between tasks. We  
10 obviously need to finish -- finish the water treatment  
11 to be able to -- to complete the final grading on the  
12 remaining exposed tailings and then removing up -- the  
13 East Upper dam to put those tailings material  
14 underneath the cap as well.

15           And -- and then we have to be able to  
16 then cap it within thawed ground conditions so we can  
17 get the appropriate compaction on the material. And -  
18 - and the implementation of the -- the liner  
19 construction as well has some -- some temperature  
20 dependencies as well.

21           So there's some -- a lot of sequencing  
22 that needs to be there. We should have design draw --  
23 or as-built drawings by the end of 2018.

24           MR. MURRAY SOMERS: Murray Somers,  
25 here from INAC. And I just wanted to make one (1)

1 point of clarity there.

2                   Heather, you'd ask that when do we  
3 expect the des -- the designs from the contractor.  
4 And I just want to clarify there that -- that it's the  
5 opposite relationship there where we've got AECOM  
6 building the design and -- and we give that design to  
7 the contractor, all right, yeah.

8                   THE FACILITATOR: Rebecca Chouinard,  
9 with the Board. I just wanted to follow-up on this  
10 just so that we're crystal clear on what it is that  
11 has been submitted and what we are expected to do with  
12 that. And so please correct me if my assumptions are  
13 wrong.

14                   But at this point you've given us what  
15 I'd call a straw dog. We know that there will be  
16 changes requested on the tailings cover design, but at  
17 this point we are not considering that as part of this  
18 review, as part of the renewal process. And instead,  
19 you would submit all of this information and request  
20 approval to change that design further down the road.

21                   And if those assumptions are correct, I  
22 guess the only point to be aware of, that we've talked  
23 about internally as staff, is just ensuring that that  
24 design criteria isn't so different from what is  
25 currently on the table such that it would impact or



1 influence anything else in the renewal process, such  
2 as EQCs, their locations, and -- and, you know, water  
3 flow, and quality, and all that stuff.

4 MR. JOEL GOWMAN: Thanks, Rebecca.  
5 Joel Gowman, with INAC.

6 Again, I'd just like to echo what  
7 Murray had said earlier on during his presentations,  
8 the overall objectives of the cap have remained the  
9 same. We've just made some changes to the -- the land  
10 form structures within it to reduce the risk to the  
11 environment by disbursing the overland flow off that  
12 cap to increase its stability in the event of storm  
13 events and to make it more durable.

14 And by implementing those changes it  
15 also allows us to mitigate the risk to the environment  
16 from our implementation of the project by taking out -  
17 - or by revising the type of quarry material and  
18 activities that we're using throughout that  
19 construction so that we minimize impact to the  
20 surrounding environment.

21 MR. MURRAY SOMERS: Murray Somers,  
22 from INAC. Yeah, just a little bit more follow-up on  
23 that, is we -- we have provided with this application  
24 an updated TCA Cover Design Report, right, and it does  
25 reflect that -- that there's no change to the

1 footprint of the TCA and there's no change to how  
2 those materials -- the waste rock and the tailings  
3 contained within there, the volumes don't change.

4                   You know, like they're all --  
5 everything is still the same on the base of the actual  
6 tailings consolidation within the TCA. It's just the  
7 structure on top, how the water is shed off the top.  
8 And so we've just tweaked it to -- to be more  
9 distributive, right, instead of have -- having a  
10 concentrated flow it'll distribute the flow off -- off  
11 the surface and -- the surface of the TCA.

12                   So that -- that's the design change.  
13 And -- and that is shown and described in the updated  
14 plan. The only thing that's not in there is  
15 engineered drawings.

16                   MS. HEATHER SCOTT: It's Heather  
17 Scott, with the Board.

18                   So just to be clear again, so it's your  
19 intent to submit that formally as a modification with  
20 the renewed water licence at this time?

21                   MR. MURRAY SOMERS: Murray Somers,  
22 with INAC. Yeah, if the Board requires engineer  
23 drawings then they can be provided, because the -- the  
24 current one (1) does have them. The current approved  
25 plan, I should say, 2012 design.

1                   THE FACILITATOR:    Rebecca Chouinard,  
2 here.  Yeah, just -- I'm just looking at the existing  
3 condition and all of the information that's required  
4 for approval of the TCA cover.  And one (1) of those  
5 things is the drawings stamped by an engineer, all --  
6 you know, that -- that wish list of all the things  
7 that we would need.

8                   So I guess, yeah, just what -- how  
9 we're -- our assumptions are that this is the  
10 beginning, just showing -- showing the conceptual or,  
11 you know, the -- the hoped-for plan, but that you  
12 would submit that updated plan with all of that  
13 information for approval down the line?

14                  MR. MURRAY SOMERS:   Murray Somers,  
15 with INAC.  That's right.  You're -- you're reminding  
16 me that that is a condition -- or a -- a component of  
17 the condition to provide those, so yeah, we -- we can  
18 absolutely provide them, there's no problem.

19                  We have them, I think, about 80 percent  
20 complete right now.  And the ones specific to the cap  
21 might be completed, I'm not sure.  But -- but anyway,  
22 the only reason that we haven't submitted them yet is  
23 simply because of the fair and equitable process for --  
24 -- for Government of Canada contracting process, right.

25                  So -- so we -- we need to wait until

1 the tender goes out before we can release those and  
2 have them be public documents and that's anticipated  
3 to be this summer, so.

4 MR. JOEL GOWMAN: Joel Gowman, with  
5 INAC. Yes, it's -- we should have finalized design  
6 drawings within the next -- within the next month to  
7 two (2) months at the latest.

8 MR. MURRAY SOMERS: Murray Somers,  
9 with INAC. Yeah, so those drawings, the -- the issue  
10 for construction drawings can be submitted to the  
11 Board before any issuance of any licence or probably  
12 before it -- the water licence is drafted.

13 THE FACILITATOR: Rebecca Chouinard,  
14 with the Board. Okay. That's helpful information.

15 I'm just thinking about timelines and  
16 such. If -- if this was a -- a plan that you would  
17 want the Board to decide on upon issuance or with  
18 issuance of the renewal, you know, we would have to  
19 get all of that evidence in time, prior to  
20 interventions and all of that stuff.

21 The way the -- the condition currently  
22 reads is you'd need Board approval ninety (90) days  
23 prior to construction. So I'm just thinking about the  
24 timelines for that, how that all fits in terms of  
25 getting all the information from you folks that the

1 reviewers would need to review as part of this  
2 process, or submitting post-issuance of the renewed  
3 licence knowing that there's that ninety (90) days if  
4 that same condition applied in the renewed licence.

5 MR. JOEL GOWMAN: So -- Joel Gowman,  
6 with INAC. We've provided a -- the conceptual plan  
7 with the application, that the overall plan within  
8 that is -- is what the -- what INAC-CARD is proposing  
9 to move ahead with. The main thing that does -- isn't  
10 included in that conceptual plan is more of the design  
11 specifics, and elevations, and whatnot.

12 Our actual onsite work for that  
13 component of the remaining project work won't be  
14 started until probably May 2017. We would be able to  
15 provide those drawings to the Board, as Murray says,  
16 as soon as we've released the documents for tendering,  
17 which I'm not sure if that -- how that would work on  
18 the timelines.

19 MR. MURRAY SOMERS: Murray Somers,  
20 here with INAC. Yeah, if it -- if essentially  
21 completing the plan by providing those -- those issue  
22 for construction drawings during mid-process for the  
23 water licence renewal, if that creates a problem for  
24 the -- for the Board processes, then like -- like Joel  
25 said, we wouldn't have a chance to act on -- on that

1 plan and do any additional work to the TCA cover  
2 until, yeah, probably May 2017.

3                   So if the water licence is issued kind  
4 of on schedule as per what was provided there, it  
5 would be December 2016, which would give us ninety  
6 (90) days. At that point we could submit the -- the  
7 drawings to finalize that plan upon issuance of the  
8 water licence, right.

9                   So that should give us time, but -- but  
10 if it's -- it would be easier for INAC or -- to give  
11 us more time and more -- a less thing to worry about  
12 if we could just update the -- the plan with the  
13 drawings now, but I don't know if that jives with the  
14 -- the process.

15                   THE FACILITATOR: Rebecca Chouinard,  
16 with the Board. My thinking off the cuff is that it  
17 would be easier to wrap it into the renewed licence  
18 just because of the tight timelines now in this  
19 process. As soon as you have that information I think  
20 you can submit it and we'd be ready to go straight out  
21 of the gate.

22                   My other concern is that just to assist  
23 reviewers to focus their review, so they know exactly  
24 what it is that they're reviewing and commenting on  
25 for the renewal. And I think our assumption, at least

1 thus far has been that that plan would be reviewed as  
2 -- as part of the renewed licence. And it seems as  
3 though we've got enough time to do that.

4                   So I think my preference would be to do  
5 it as part of the renewed licence to give the  
6 reviewers the full opportunity to review all of the  
7 components, all of the design criteria, in addition to  
8 checking off all of things that would be on that list.

9                   But if that information is all  
10 available upfront we could get that process going  
11 really quickly, and I -- I don't think that May target  
12 date would be a problem at all.

13                   MR. JOEL GOWMAN: Just to clarify  
14 though, our -- our plans to resume construction on the  
15 cap wouldn't recommence until May. But given the fact  
16 that the remote location of the site and the fact that  
17 if there's any changes, or suggestions, or concerns  
18 brought forward by the Board or Intervenors for the  
19 approval of that component to the site, I think CARD  
20 would like to try to provide the information to the  
21 Board as soon as possible so that we get the approvals  
22 well in advance of May.

23                   Because if we do need to make any  
24 modifications, we would need some more extensive time  
25 in order to do that. So like I say, we should be able

1 to have the documentation ready to release by July.  
2 And I think, if possible, we'd like the opportunity to  
3 -- to submit that.

4 THE FACILITATOR: Rebecca Chouinard,  
5 with the Board. Yes, I -- I would then just encourage  
6 you to submit it when you get it. We can evaluate  
7 where we're at in the process at that point.

8 What we have done with other files in  
9 the past where we've received updated plans where  
10 they're eager to get going, we have had those plans  
11 and we've posted them so reviewers can see them, but  
12 not to, you know, fetter the Minister's decision or  
13 the Board's decision have not officially begun that  
14 review until the day of. And the day of we could get  
15 started on those reviews and -- and make them happen  
16 pretty quickly.

17 But that said, I think as soon as you  
18 get that information just submit it and we'll see  
19 where we're at at that point.

20 MR. JOEL GOWMAN: Thanks for that  
21 clarification, Rebecca.

22

23 (BRIEF PAUSE)

24

25 THE FACILITATOR: Okay. Rebecca



1 Chouinard, with the Board. Just wondering is there  
2 any other questions from anybody on -- on this topic,  
3 Management Plans and Reports?

4 I'm not seeing any nods, so I think at  
5 this point we're almost at noon, right on schedule, so  
6 I think we will break for lunch.

7 I know there are a couple Information  
8 Requests that were put on the table and required a  
9 little bit of discussion before finalizing. And if  
10 the folks are involved in those Information Requests  
11 are available to stick around for another five (5)-ten  
12 (10) minutes that would be great.

13 Otherwise, let's meet back here at  
14 1:15. Oh, it sounds like INAC has something.

15 MR. JOEL GOWMAN: Joel Gowman, with  
16 INAC. Just one (1) question for the Board advisors  
17 with regards to the reclamation plan.

18 A couple of our components of the site  
19 have shared interests between INAC and third-party  
20 land users, specifically Seabridge Minerals or --  
21 Seabridge Gold with their -- their Courageous Lake  
22 project.

23 In particular the -- the road between  
24 the airstrip, and our site, and the -- the bridge over  
25 the Sandy -- Sandy Creek. Essentially, there -- there

1 may be some interest from Seabridge to include some of  
2 that infrastructure within their -- their -- within  
3 their project. So we might be adjusting some of our  
4 commitments under our proj -- overall project  
5 description as far as whether -- how the -- how we  
6 complete our project with regards to removal of the  
7 bridges and scarifying the roads.

8                   So we were looking for some input from  
9 the Board advisors as to the best way to ensure that  
10 our operations don't -- don't unfairly impact other  
11 permitted users of the site.

12                   THE FACILITATOR: Rebecca Chouinard,  
13 with the Board. Yeah, it's a -- definitely a  
14 complicated situation and not the first time INAC-CARD  
15 has faced these types of challenges. So I think, you  
16 know, we have some precedence out there. I'm thinking  
17 of Tye He (phonetic) and Discovery (phonetic).

18                   In particular, I think at this point  
19 I'm strongly encouraging you folks to engage with  
20 Seabridge and -- and any recommendations you put  
21 forward to the Board just really clarify what  
22 conversations you've had and the rationale for what  
23 you want to do and any discrepancies. And I think if  
24 there's a need we could bring both parties to the  
25 table or, you know, hold a workshop or whatever to

1 iron out some of the details.

2                   If there -- if you have any proposed  
3 wording for, you know, what would be required as part  
4 of the licence, I -- I encourage to put that forward.  
5 Otherwise, beyond just keeping communications tight  
6 with Seabridge and the Board, I think we would try to  
7 work that in through the process moving forward post-  
8 issuance.

9                   But if you have a different suggestion  
10 I'm definitely interested in what that would be.

11                   MR. JOEL GOWMAN: Joel Gowman, with  
12 INAC. And I appreciate your feedback there, Rebecca.

13                   We will be continuing to have ongoing  
14 discussions with Seabridge just to advise them of our  
15 progress and various operations throughout the rest of  
16 the site, because we've got shared use of the airstrip  
17 and other components of our operation.

18                   And I would probably suggest that it be  
19 handled outside of the renewal that we document our  
20 communication and the overall plan and the -- the  
21 reclamation plan that's associated with the -- the  
22 roads and a submittal to the Board under its -- the  
23 kind of the standard conditions and timelines. Thank  
24 you.

25                   THE FACILITATOR: Great. Okay.

1 Rebecca, with the Board. With that let's break for  
2 lunch and meet back at 1:15. Thank you, everybody.

3 MS. MORAG MCPHERSON (BY PHONE):

4 Rebecca...?

5 THE FACILITATOR: Oh, yes?

6 MS. MORAG MCPHERSON (BY PHONE): This  
7 is Morag, with Fisheries and Oceans. Before we break,  
8 I have another meeting at one o'clock today so I'm not  
9 going to be available to sit in this afternoon and I  
10 don't think Georgina is able to either.

11 So I just wanted to -- to say a couple  
12 things if that's all right before I go. And then if -  
13 - if some topics come up on the long-term monitoring  
14 for DFO or questions, I guess those could be forwarded  
15 to myself and to Georgina.

16 THE FACILITATOR: Sure, yes. Go  
17 ahead, Morag, if you want to -- if folks don't mind  
18 staying another five (5) minutes or so?

19 MS. MORAG MCPHERSON (BY PHONE): Sorry  
20 about that.

21 THE FACILITATOR: No problem.

22 MS. MORAG MCPHERSON (BY PHONE):

23 Morag, again, with Fisheries and Oceans. Yeah, I just  
24 wanted to say, because I won't be able to be there, if  
25 there's sort of closing remarks on this, but we've

1 been involved in this project and the previous water  
2 licence and a lot of the plan development and  
3 monitoring reporting that's happened over the past  
4 eight (8) years, I guess.

5                   So a lot of the information that's  
6 here, we've -- we've provided input into that and feel  
7 pretty comfortable with what is still being proposed  
8 and any small changes that have happened, so in terms  
9 of the -- the millpond drawn-down was sort of a bigger  
10 one, which we've worked with them on that and feel  
11 that the mitigation measures are in place that we've  
12 asked for in terms of our evaluation of impacts there.

13                   So we feel comfortable with what's been  
14 put forward and don't really have any outstanding  
15 information items at this point, or issues, and just  
16 wanted to communicate that to the Board and to the  
17 proponent at this point in time. And we'll continue  
18 to provide input on the draft licenses, and through  
19 the process, and -- and reports and plans that come  
20 forward.

21                   It's mainly been the -- the monitoring  
22 plans and the erosion and sediment control plan that  
23 we've provided input on, so we'll continue to do that  
24 through the process. But otherwise, yeah, no  
25 outstanding issues at this point.

1 THE FACILITATOR: Rebecca, with the  
2 Board. Okay. That's good to hear, Morag. Thank you  
3 for that. And if anything does come up that relates  
4 to Fisheries and Oceans this afternoon, we will try to  
5 capture it in the form of an Information Request and -  
6 - and get it sent to you by the end of the day or by  
7 tomorrow.

8 MS. MORAG MCPHERSON (BY PHONE):  
9 Great. Thank you very much.

10 THE FACILITATOR: Okay. Thank you.  
11 And with that, we will break for lunch.

12 MS. MORAG MCPHERSON (BY PHONE):  
13 Goodbye.

14 THE FACILITATOR: Bye-bye, Morag.  
15

16 --- Upon Recessing

17 --- Upon Resuming

18

19 MS. REBECCA CHOUINARD: Okay, I think  
20 we'll get started. It sounds like we've got the phone  
21 up and running. And I think we've got everyone in the  
22 room that we're expecting.

23 So this is Rebecca Chouinard, for the  
24 Mackenzie Valley Land and Water Board. And just for  
25 anybody who's joined us, the technical session today

1 will -- is being recorded. And so prior to speaking,  
2 if you could please state your name, your organization  
3 and speak slowly. And I've got signs to help remind  
4 everybody.

5 I think we'll start off by just  
6 reviewing the Information Requests that we captured  
7 during the morning. But before we do that, I just  
8 want to go around the room one (1) more time. We've  
9 got a new person in the room, so if we could just do a  
10 roundtable of introductions before starting off, for  
11 the record. And we'll start over on this side of the  
12 room.

13 MR. SHIN SHIGA: Shin Shiga, North  
14 Slave Metis Alliance.

15 MS. JEN POTTEN: Jen Potten, Mackenzie  
16 Valley Land and Water Board staff.

17 MS. SHANNON ALLERSTON: Shannon  
18 Allerston, Mackenzie Valley Land and Water Board  
19 staff.

20 MS. HEATHER SCOTT: Heather Scott,  
21 Board staff.

22 MS. REBECCA CHOUINARD: Rebecca  
23 Chouinard, Board staff.

24 MS. TYREE MULLANEY: Tyree Mullaney,  
25 Board staff.

1                   MR. RICK WALBOURNE:   Rick Walbourne,  
2 ENR Water Resources Division.

3                   MR. MURRAY SOMERS:   Murray Somers,  
4 INAC.

5                   MR. JOEL GOWMAN:   Joel Gowman, INAC  
6 CARD.

7                   MS. REBECCA CHOUINARD:   And I don't  
8 think there's anybody on the phone.  If there is,  
9 speak now.  No, okay.  Perfect.

10                   With that, I'm going to turn the floor  
11 over to Jen to read out the Information Requests from  
12 this morning.

13                   MS. JEN POTTEN:   This is Jen, Board  
14 staff.  So the following -- there's -- we've got three  
15 (3) Information Requests that we've combined, and so  
16 I'm going to go through them one-by-one.  All of them  
17 currently, according to the work plan, are due June  
18 23rd, 2016, which is tomorrow -- or today, the 28th.  
19 There we go.  I'm glad that I said that so we can be  
20 correct.

21                   So I know that we were talking a little  
22 bit about time this morning.  So if that date doesn't  
23 work based on what we've -- we've proposed for wording  
24 here, then let us -- now's the time to sort of talk --  
25 talk about that.



1                   So the first Information Request is  
2 about the water treatment facility. Based on all of  
3 the current and historical water quality data  
4 downstream of the water treatment facility, including  
5 but not limited to information collected for the human  
6 health and ecological risk assessment baseline data  
7 and annual reports, please provide evidence and  
8 rationale that supports INAC CARD's recommendation to  
9 maintain the discharge criteria identified in part B,  
10 item 6, of the existing water licence, MV2009L80008.

11                   And I can repeat that if you guys would  
12 like.

13                   MR. JOEL GOWMAN: Joel Gowman, with  
14 INAC. I'm assuming this will be forwarded to us in an  
15 email so we'll have the exact wording?

16                   MS. JEN POTTEN: Yeah, definitely.  
17 We're going to send out these hopefully by the end of  
18 the day and, if not, by tomorrow. Okay.

19                   The second Information Request is about  
20 the SNP for decommissioning. Please provide  
21 surveillance network program stations with associated  
22 effluent quality criteria, if applicable, with  
23 supporting evidence and rationale to ensure ongoing  
24 protection of the environment following  
25 decommissioning, including testing requirements,

1 sampling frequencies and parameters and activation  
2 triggers.

3 MR. JOEL GOWMAN: Joel Gowman, with  
4 INAC. Is that effluent criteria with regards to our  
5 discussion on the sewage discharge or the overall  
6 water treatment discharge?

7 MS. REBECCA CHOUINARD: Rebecca  
8 Chouinard. That's the one -- the overall, so. And  
9 we're thinking about once any dams are breached or  
10 water treatment has stopped, just sort of looking past  
11 the -- the next one (1) to two (2) years, that five  
12 (5) year monitoring, adaptive monitoring phase.

13 So without defining what all of those  
14 areas or activity triggers might be, we just thought  
15 if we open it up and -- and put it in your court to  
16 try to define certain activities that might trigger  
17 the need for additional sampling stations and propose  
18 EQC and SNP locations, if applicable, knowing that  
19 some stations might be just for monitoring and others  
20 might be appropriate EQC stations or compliance  
21 points, yeah.

22 MR. JOEL GOWMAN: Okay, thank you for  
23 the clarification. That -- that sounds good.

24 I know some of our existing stations  
25 are seepage stations and whatnot that aren't actually

1 relevant for current operations now, so, it's a good  
2 opportunity to make everything more meaningful. Thank  
3 you.

4 MS. JEN POTTEN: This is Jen, Board  
5 staff. So IR Number 3 is about sewage discharge.  
6 Please recommend surveillance network program station  
7 locations, testing requirements, sampling frequencies  
8 and parameters, activation triggers and discharge  
9 criteria for sewage discharge from the sewage  
10 treatment facility, if needed, as a contingency  
11 measure.

12

13 (BRIEF PAUSE)

14

15 MS. REBECCA CHOUINARD: Okay, it's  
16 Rebecca, with the Board. So as Jen mentioned, we'll  
17 ensure that those Information Requests are sent out.  
18 If you have any questions about those or want to look  
19 the wording over during a break prior to closing the  
20 session, then you'll have the opportunity to do that,  
21 as well.

22 So okay, with that, let's move into our  
23 next topic, long-term monitoring and triggers. So  
24 I'll turn the floor over to Murray for a presentation  
25 on this topic.

1

2 PRESENTATION BY INAC-CARD re LONG TERM MONITORING AND  
3 TRIGGERS

4 MR. MURRAY SOMERS: Murray Somers,  
5 INAC, here. I'll flip ahead. This part is going to  
6 be pretty brief considering we -- we mentioned before  
7 right at the top here that long-term monitoring is  
8 going to actually fall under a new type B -- land use  
9 permit and type B water licence, so I haven't put a  
10 lot of information up here today, but we'll -- we'll  
11 get into it here and then we'll have a good  
12 discussion.

13 So our adaptive management phase is  
14 intended to run until 2023 and a five (5) year ideal  
15 and after which we'll kick into long-term monitoring.  
16 Trigger for the -- a better trigger than just saying  
17 2024 anyway is to -- to say that, once adaptive  
18 management phase indicates that the site is  
19 geotechnically stable and water quality is stabilized  
20 as per the 2016 AGGRA (phonetic) that's coming up,  
21 then -- then that will indicate, okay, it's time to go  
22 into an annual monitoring kind of scenario, long-term  
23 monitoring plan.

24 Yeah, which I said, yeah, will reduce  
25 down to one (1) year. Now, in order to determine what

1 you're monitoring you have to establish a baseline  
2 condition for long-term monitoring, and it's going to  
3 be based on a few things that are -- are up and  
4 coming, right?

5                   So we don't have, you know, say what  
6 SNP stations need to be out there right now, what  
7 parameters exactly we need to be monitoring because,  
8 well, you can't know -- it's a little too early to  
9 know that right now.

10                   But the 2016 AGGRA is going to predict  
11 long-term impacts and rate of recovery, so it's going  
12 to have some identified risks or potential risks out  
13 there that are predicted, which are things that will  
14 feed the long-term monitoring program.

15                   As we said earlier, as well, status of  
16 environment report will likely be around 2020. That's  
17 also going to identify and describe any environmental  
18 risks remaining at the site which will help refine  
19 appropriate stations and -- and parameters.

20                   And last are -- yeah, the -- during the  
21 adaptive management phase we'll be monitoring the  
22 whole time and the results of that. We'll -- we'll  
23 also show any post-remediation environmental trends  
24 that -- that we might want to continue to -- to watch  
25 and monitor.

1                   But at that poi -- at this point,  
2 that's about as -- as far as we can look in the long-  
3 term monitoring of the site, so not much else to say  
4 at this point, so I'll hand it back over.

5

6 QUESTION PERIOD

7                   MS. REBECCA CHOUINARD:    Okay, it's  
8 Rebecca, with the Board. Thank you for that, Murray.

9                   I'm just looking at the -- the agenda,  
10 and it identifies a few comments that came out during  
11 the online review system review. And they're all from  
12 Mackenzie Valley Land and Wat -- Water Board staff.

13                  Before I turn the floor over to staff,  
14 I just wanted to canvass the room to see if there are  
15 any questions or suggestions, comments, points of  
16 clarification on long-term monitoring for others in  
17 the room.

18                  It does not appear so, so I will turn  
19 the floor over to Board staff.

20

21   (BRIEF PAUSE)

22

23                  MS. TYREE MULLANEY:    Okay, this is  
24 Tyree, with the Board. Just a question that I have  
25 are -- is: What are the triggers that would move the

1 project from remediation to adaptive management? When  
2 would that transition happen?

3 MR. MURRAY SOMERS: It's Murray here,  
4 with INAC. I -- I guess it was touched on as probably  
5 definitively as -- as I can understand it right now --  
6 right now, is once the objective of the adaptive  
7 management phase has been reached, which is ensuring  
8 that the site is, essentially, geotechnically stable  
9 and there's no erosion control issues or -- or the  
10 site features that have been engineered onsite, as  
11 long as they're performing as expected, don't need any  
12 more annual maintenance onsite, then we can consider  
13 it geotechnically stable.

14 And -- and once water quality has -- is  
15 likely stabilized as far predicted from the AGGRA,  
16 then -- then we can move into the long-term monitoring  
17 phase. Is that clear?

18

19 (BRIEF PAUSE)

20

21 MS. TYREE MULLANEY: This is Tyree,  
22 with the Board. I'm just going to go back. What I  
23 meant was, from phase 2 remediation into the adaptive  
24 management phase, what would be that transition there,  
25 not more so the adaptive to long-term?

1 MR. MURRAY SOMERS: Right, got --  
2 sorry. Murray, with INAC.

3 Yeah, I touched on that a little bit in  
4 one (1) of the previous presentations, as well. And  
5 through discussions that we've had previously, it --  
6 it looks like once natural free flow is established --  
7 re-established between Mill Pond and Hambone Lake, the  
8 -- the sequencing of events in the remediation  
9 program, that can't happen until basically all the  
10 other remedial objectives for phase 2 has been  
11 reached.

12 So that's, essentially, the last thing  
13 that can happen. And so that's probably the most  
14 logical point to say that phase 2 remediation is  
15 complete and we're entering into adaptive management  
16 phase.

17 There's always the possibility that  
18 during adaptive management, that monitoring could --  
19 could show that a water quality's not behaving as  
20 expected and maybe we need to treat water for a bit  
21 longer or something while we fix something, but -- but  
22 that can still be kind of done under the umbrella of -  
23 - of adaptive management.

24 MS. REBECCA CHOUINARD: Rebecca  
25 Chouinard, with the Board.



1 I just want to follow-up on this line  
2 of questioning just to give you a sense of why we  
3 care, and it's just for the purposes of drafting the  
4 licence for consideration to the Board.

5 And I think it's linked to some of the  
6 IRs that are already drafted in terms of the SNP  
7 stations, when -- when should new SNP stations come  
8 online, when should existing ones go offline, will  
9 there be new EQCs, will there be new compliance  
10 points, will there be a requirement for additional  
11 plans or modifications to plans, that sort of thing.

12 So I think we're trying to think of  
13 this in -- in a drafting frame of mind. So I -- I  
14 think just in terms of your comments on the -- your  
15 responses to the IRs, if -- if any of that -- those  
16 triggers come to mind, particularly activity --  
17 defined activity triggers for changes as it relates to  
18 a water licence, that would be helpful.

19 And I guess you'll have the opportunity  
20 also when you review the draft licence that -- that  
21 we'll do our best to prepare.

22 MR. JOEL GOWMAN: Joel Gowman, with  
23 INAC. Thanks for that clarification, Rebecca.

24 We'll -- when we're preparing our  
25 responses to the IRs, we'll keep that in mind for the

1 -- making sure that we try to outline our -- our  
2 trigger points for that transition between phases.  
3 And ...

4

5 (BRIEF PAUSE)

6

7 MS. HEATHER SCOTT: It's Heather  
8 Scott, with the Board.

9 So having all that said, I'm trying to  
10 think about what information you guys will have in the  
11 next couple of years to inform some of those  
12 decisions. And I'm wondering if you'll have any  
13 reports generated on your end which will help inform  
14 your plans for two (2) years down the line when some  
15 of those triggers will occur and how that could inform  
16 our process as well and if we could write conditions.

17 You know, say if you have an adaptive  
18 management plan being generated by one (1) of your  
19 consultants, then that could be a requirement under  
20 our licence to -- to get that report at a certain  
21 time.

22 MR. JOEL GOWMAN: Yes, so, Joel  
23 Gowman, with INAC. We can definitely provide a bit  
24 more information on what sort of deliverable we would  
25 have for setting out adaptive management scope.

1                   We have discussed it within the --  
2 within the context of our upcoming tendered documents  
3 for what would be included within year 1 of adaptive  
4 management. And we can definitely provide a bit more  
5 clarity with our -- the response to the IRs that are  
6 in place.

7                   I'm just trying to think. Is there  
8 anything you'd like to add, Murray, on that?

9                   MR. MURRAY SOMERS:    Yeah, Murray  
10 Somers, INAC. Yeah, we'll -- we'll work hard on that  
11 to -- to make sure that things are more -- like an SNP  
12 program mo -- long-term monitoring -- or during the  
13 adaptive management phase, whatever it is, is set up  
14 to be more trigger based, like you said; that's  
15 essentially how it's set up now.

16                   So during particular activities there's  
17 differing monitoring requirements, right? And -- and  
18 so we can definitely look at that as well and come up  
19 with what's most logical for -- for our operations,  
20 yeah.

21                   MS. REBECCA CHOUINARD:   Rebecca  
22 Chouinard, with the Board. I just wanted to clarify  
23 that.

24                   So you -- Joel, you said that you would  
25 be able to provide a list of dever -- deliverables

1 that are being developed by the INAC CARD team's  
2 consultants that could help inform possible water  
3 licence conditions or could help identify potential  
4 triggers, activity triggers?

5 MR. JOEL GOWMAN: Joel Gowman, with  
6 INAC. We will have some of the -- the scope  
7 activities within our -- kind of our internal  
8 discussions we've already had with our team.

9 We haven't -- haven't necessarily  
10 developed other plans that we can pull off the shelf  
11 currently to feed into that. But we can -- with the  
12 context of the discussion as far as setting new SNP  
13 points and -- and compliance points, we can definitely  
14 provide more information with the Information Requests  
15 with those responses.

16 MS. REBECCA CHOUINARD: Rebecca  
17 Chouinard, with the Board.

18 Just to clarify, you could provide that  
19 as a Information Request by June 28th?

20

21 (BRIEF PAUSE)

22

23 MS. REBECCA CHOUINARD: Rebecca  
24 Chouinard. To -- not to force your hand or anything,  
25 but perhaps an attempt to do so.

1                   And if during your review of the water  
2 licence, the draft water licence that will be  
3 circulated, if additional things come to mind or -- I  
4 -- I mean, you might not have a comprehensive list  
5 right now, but is it fair to maybe ask for what you --  
6 what you definitely have online right now?

7                   MR. JOEL GOWMAN:     Joel, with INAC.  
8 Yes, we should be able to put together a conceptual  
9 approach anyhow. And we can modify further with  
10 discussions with your team once the draft licence is  
11 ready for review.

12                   MR. MURRAY SOMERS:    Yeah. Sorry,  
13 Murray Somers here, with INAC.

14                   I think what we can do is take a look  
15 at what the monitoring SNP program looks like right  
16 now and -- because it's all activity-based monitoring,  
17 essentially baseline and activity-based monitoring.

18                   And -- and the activities onsite for  
19 remediation aren't going to change, so -- so, like,  
20 the dam removals and whatnot, they're still all  
21 covered under during excavation of tailings and  
22 whatnot that -- which are already triggers within the  
23 -- the SNP program.

24                   So I don't know if -- I think we're --  
25 we're looking at a once triggers are removed sort of

1 thing, so once we move into the next phase what's it  
2 going to look like. And then -- so once we move into  
3 adaptive management, so certain triggers are going to  
4 be lost, and -- and so what's it going to look like at  
5 that point in time, and -- and the same for long-term.

6           So, yeah, we can definitely come up  
7 with something conceptual for that, obviously,  
8 requiring refinement as -- as reports and thing --  
9 whatnot come in.

10           MR. JOEL GOWMAN:    Sorry, one (1) other  
11 thing.  Joel Gowman, with INAC.

12           With regards to reports, we'll still  
13 have, obviously, our construction completion reports  
14 that our consultants will be preparing and the risk  
15 assessment.  And any of our annual water licence  
16 monitoring reports will all feed into how we -- what  
17 suggestions we make as we go forward here, so.

18           MS. HEATHER SCOTT:   Hi.  It's Heather  
19 Scott, with the Board.  Thanks for that.

20           I guess I was asking that original  
21 question to help alleviate the work a little bit.  So  
22 if you're already producing a report that would help  
23 inform our decisions, then we could align our process  
24 with what are deliverables on your end, as well.  
25 That's what I was getting at, I guess.  Thanks.

1 MR. JOEL GOWMAN: Joel Gowman, with  
2 INAC. I think, in that context, probably the  
3 construction completion report after the 2017 work  
4 season should give us a better understanding of what  
5 we're proposing for some monitoring stations, both for  
6 our due diligence and for environmental compliance.

7 So that report probably -- I'm just  
8 trying to think of a -- it'd be early 2018 before that  
9 report would be out. That would be a good -- a good  
10 set of data to feed into some of that.

11

12 (BRIEF PAUSE)

13

14 MS. JEN POTTEN: This is Jen, with  
15 Board staff.

16 So another suggestion, instead of  
17 providing a hard and fast date, is to provide a time  
18 frame post an event, so, following the completion of  
19 that activity, then, you know, ninety (90) days, four  
20 (4) months, kind of thing like that, is -- is less  
21 accurate than a date, but that -- we can still use  
22 that to set a time frame.

23

24 (BRIEF PAUSE)

25

1                   MR. JOEL GOWMAN:   Joel Gowman, with  
2 INAC. I think, from an operational perspective, if we  
3 said four (4) months from the completion of site  
4 activities we should be able to have a construction  
5 completion report from the 2017 field season.

6

7

(BRIEF PAUSE)

8

9                   MS. REBECCA CHOUINARD:   Okay, Rebecca  
10 Chouinard here. I got a little confused, but I -- it  
11 turns out I wasn't confused, so that's good. But just  
12 to make sure nobody else is confused, I'll attempt to  
13 clarify.

14

                  I think what we are asking for is,  
15 yeah, the -- it sounds as though your team is  
16 developing a number of various documents, like the  
17 status of environment report and the HHERA and all --  
18 you know, all of these things that aren't necessarily  
19 required under the water licence but you're doing them  
20 anyway.

21

                  And some of those reports or plans or  
22 studies have helpful information in them. And if we  
23 can align our processes and align some of the  
24 conditions with some of the findings that some of your  
25 ongoing, you know, studies will provide, then I think



1 it could be a win/win.

2                   So I think the -- the request was  
3 simply, if you have a sense, even a conceptual general  
4 idea of what that list of different report studies,  
5 plans are that you've got in the pipes right now or  
6 that you see coming down the pipes that we might be  
7 able to align some of our licence conditions or, you  
8 know, annual report requirements or whatever.

9                   If you're -- if you're getting this  
10 information anyway, maybe we can use it. So I think  
11 the way the question -- I think the Information  
12 Request is just a simple list of what reports and  
13 plans and studies and stuff you have planned for that  
14 upcoming years.

15                   MR. JOEL GOWMAN: Thanks for that  
16 clarification. Joel speaking again.

17                   I think we can definitely provide some  
18 more information on reports that would provide  
19 relevant information feeding into that. In  
20 particular, I think some of the study results that  
21 we're doing over the course of the summer, our water  
22 balance and geochemistry reports, will be really  
23 useful for -- for feeding those decisions.

24                   And it'll also be timely information to  
25 be able to provide that information in advance of

1 finishing up remediation and -- and finalizing our  
2 compliance points and monitoring stations for that  
3 next phase of adaptive management.

4 MS. REBECCA CHOUINARD: Rebecca  
5 Chouinard. Thank you. I think that will be really  
6 helpful.

7 Since, you know, the licence was  
8 drafted a number of years ago, some of that  
9 information that me -- we might want to have, that  
10 would be great to know that you already are collecting  
11 that information and to, you know, align our -- our  
12 requests with what you're actually doing if it's, you  
13 know, gives us the information we need.

14 So to avoid duplication or anything  
15 like that down the line, I think that would be very  
16 helpful, so, great.

17

18 --- INFORMATION REQUEST NO. 4: INAC CARD to list  
19 what reports and  
20 plans and studies  
21 and stuff you have  
22 planned for upcoming  
23 years.

24

25 MS. REBECCA CHOUINARD: Moving on. Is

1 there -- are there any other questions from Board  
2 staff on -- okay.

3 MS. HEATHER SCOTT: Hi. It's Heather  
4 Scott, from the Board. So looking at the monitoring -  
5 - what is this plan that you've submitted to the  
6 Board, Development of Tundra Mine Construction  
7 monitoring, long-term monitoring and environment  
8 programs.

9 So that document says that, following  
10 the submission of the status of the environment  
11 report, that you'll make decisions about long-term  
12 monitoring. So we're presuming that the status  
13 environment report will -- the submission will be a  
14 condition of the new water licence.

15 Do you anticipate that you'll change --  
16 you'll make updates to this plan within the life of  
17 the next water licence or would that be something that  
18 you would do for the submission of the type B water  
19 licence application?

20 MR. JOEL GOWMAN: Joel Gowman, with  
21 INAC. I think that the -- the preparations for our  
22 next type B water licence is going to be kind of a  
23 progressive task that we carry out as a team over the  
24 next seven (7) years, essentially, looking at what  
25 challenges we encounter, especially earlier on in the

1 adaptive management, to make sure that we're -- we're  
2 incorporating the right sampling -- sample frequency  
3 and sample locations into that longer term monitoring  
4 plan.

5                   So I guess we would be -- we would be  
6 preparing a revised or updated plan for submission to  
7 the Board. We'd probably be looking to the Board  
8 staff for some advice as to whether or not it's best  
9 to formally present and review that with the Board  
10 staff during this water licence or if it -- or if it's  
11 a document that feeds directly into the application  
12 for the -- for the type B.

13

14                   (BRIEF PAUSE)

15

16                   MS. REBECCA CHOUINARD:     Rebecca  
17 Chouinard, with the Board.

18                   I think it's a point we'll have to  
19 think about a little bit, but it's -- I think it's  
20 related to the -- the previous Information Request and  
21 part of the benefit of knowing what plans you've got  
22 and what studies and programs are in place. We could  
23 link, you know, the adaptive management framework to  
24 certain, you know, reporting requirements to -- to  
25 specific points where you get additional information,

1 so the findings of the SOE or, you know, other things  
2 down the line.

3                   So I think we'll probably want to take  
4 -- have a little think about how that would be worded  
5 in the draft licence and what -- I envision probably a  
6 schedule that would say all the things that should be  
7 in there and what should be reported on and at what  
8 stage, at what time, and the linkages between, you  
9 know, the var -- various phases and the differences  
10 between those phases.

11                   So I think we will try our best, based  
12 on the information you get -- give us through the  
13 additional IRs, to craft something along those lines.  
14 And please do comment on that element of the draft  
15 licence when it comes out.

16                   MR. JOEL GOWMAN:    Thanks, Rebecca.  
17 Murray and I were -- this is Joel Gowman speaking.

18                   Murray and I were just discussing  
19 during that little intermission as well that the long-  
20 term monitoring plan, similar to what you were saying,  
21 would likely be best informed by the results of the  
22 statement of environment report.

23                   And then any of the trends and results  
24 that were -- were identified in the -- what I'm  
25 assuming is going to be an annual reporting

1 requirement under the adaptive management phase. So  
2 any -- any results that we see there of elevated  
3 criteria in certain areas or if we -- if we're  
4 observing stability in certain areas and that, we'd  
5 take that into consideration when we're developing the  
6 long-term monitoring plan.

7                   For the adaptive monitor -- or adaptive  
8 management phase of the project, similar to what we  
9 said before, we'd be looking at our water balance  
10 report, the geochemistry report, and the risk  
11 assessment to kind of develop a firmer -- kind of  
12 basically an update to the -- the 2000 -- the SENES  
13 report that you have in front of you there, Heather,  
14 2011, sorry, basically to provide an updated sampling  
15 plan or monitoring plan for that adaptive management  
16 phase of the project.

17                   MR. MURRAY SOMERS: Murray Somers,  
18 INAC. Just to follow-up on Joel's -- his comment  
19 there.

20                   Yeah, once -- once remediation's done,  
21 all of our activity-based triggers are pretty much  
22 over as per SENES 2011, right. And so I envision that  
23 the -- the first year of adaptive management is going  
24 to pretty much follow the monthly SNP program as it is  
25 right.

1                   Like I said, in August we'll suggest  
2 some revisions to that simply based on -- on results  
3 we're seeing, right, the -- the lack of -- of hits  
4 essentially for a lot of the far-out stations and  
5 whatnot. We might want to -- to reduce those numbers  
6 a little bit. But -- but, otherwise, I imagine for  
7 the first year we'll basically follow the SNP as per -  
8 - the baseline SNP as per the current licence. And  
9 then -- and then based on that status of environment  
10 report, we can refine.

11                   MS. HEATHER SCOTT: Heather Scott,  
12 with the Board. So in terms of timing, if the Board  
13 were to require some sort of adaptive management plan  
14 or framework, what would be the right timing for INAC  
15 to submit such a thing?

16                   It's Heather Scott, from the Board.  
17 And that timing could be, you know, by a date or by a  
18 trigger, work onsite or a trigger of a report that  
19 INAC has had contracted.

20

21                   (BRIEF PAUSE)

22

23                   MR. JOEL GOWMAN: Joel Gowman, with  
24 INAC. Just to tie it back in with some of -- one (1)  
25 of our previous responses, we're just wondering if

1 it'd be acceptable to the Board if we said four (4)  
2 months following the completion of the 2017 field  
3 season.

4 Is that a time line that would be --  
5 meet your requirements?

6

7 (BRIEF PAUSE)

8

9 MS. HEATHER SCOTT: It's Heather  
10 Scott, with the Board. Can you clarify when your  
11 field season ends?

12 MR. JOEL GOWMAN: Joel Gowman, with  
13 INAC. So, essentially, at the Tundra Mine we've --  
14 our -- the end of our field season is usually between  
15 the end of September and early to mid-November is,  
16 essentially, the latest we've operated onsite. Just  
17 with the shortness of days and the temperature and  
18 other weather constraints, it quite severely limits  
19 what we can do any later than that.

20

21 (BRIEF PAUSE)

22

23 MS. REBECCA CHOUINARD: Okay Rebecca  
24 Chouinard, from the Board.

25 Just in an attempt to keep things



1 moving here, that's -- I think this was a helpful  
2 conversation for our purposes for drafting the  
3 licence. And again, knowing your time lines for the  
4 other reports and -- and things that are coming in  
5 will be helpful.

6                   And I think we'll take a stab at, you  
7 know, using all this information to propose something  
8 in the draft and again make recommendations,  
9 suggestions on whatever we draft and provide your  
10 rationale. And I think that will probably be the best  
11 way forward on that topic.

12

13   (BRIEF PAUSE)

14

15                   MS. REBECCA CHOUINARD:    Okay, Rebecca  
16 Chouinard, with the Board. Just wondering, is there -  
17 - are there any more questions from folks around the  
18 room on long-term monitoring and triggers?

19

20   (BRIEF PAUSE)

21

22                   MS. REBECCA CHOUINARD:    No. Okay,  
23 we're a bit ahead of schedule. And I suggest we just  
24 keep plowing through. Our snacks and coffee have not  
25 yet arrived, so why don't we just move on to

1 miscellaneous items. And the first topic there is  
2 hydrocarbon contamination. And there were a couple  
3 comments from ENR.

4 So if we pass the floor over to ENR.

5 MR. RICK WALBOURNE: Rick Walbourne,  
6 ENR. Yeah, we did have a couple of questions on the -  
7 - on the hydrocarbons. One (1) was just related to  
8 some contamination, I guess, that happened during  
9 remedia -- the remediation phase.

10 I spoke to Murray on the phone about  
11 that. And they -- and CARD did provide a response in  
12 their -- in the ORS table, so we're -- we're satisfied  
13 with that -- with that response. Some -- some actions  
14 were taken moving forward to hopefully prevent that  
15 from happening in the future, so that was fine.

16 The other comment we had there were  
17 regarding some questions we had about the remediation  
18 criteria that was being used for soils. Again, we're  
19 -- I spoke to Murray offline there, and -- and they  
20 provided a com -- a response in the summary table.  
21 So, again, ENR is satisfied with the response that was  
22 provided by CARD.

23 So we have no further comments or  
24 concerns in that regard at this point. Thank you.

25 MS. REBECCA CHOUINARD: Rebecca

1 Chouinard, with the Board. Thank you for that, Rick.

2 Any other questions or comments on  
3 hydrocarbon contamination? Nothing around the room.  
4 Okay, the next topic is general. And there were a few  
5 questions from Mackenzie Valley Land and Water Board  
6 staff.

7 Before we move on to that, just  
8 wondering, are there any other questions, comments,  
9 recommendations under the general category for anyone  
10 else in the room? No. Okay. Then I'll turn the  
11 floor over to staff.

12

13 (BRIEF PAUSE)

14

15 MS. REBECCA CHOUINARD: Okay, it's  
16 Rebecca, with the Board. I did have one (1) question,  
17 and it's rather just a point of clarification, and it  
18 was comment number 10 in the ORS table. And just a  
19 little bit of background on this. It's about the fact  
20 that your site is located on both federal and non-  
21 federal areas.

22 And I recently was at a meeting with  
23 GNWT officials and federal officials and -- and was  
24 relieved to learn that there have been a lot of  
25 conversations and collaborations behind the scenes on

1 this project. And it sounded as though everybody is  
2 satisfied and in support of drafting one (1) licence  
3 to the federal minister with federal inspectors.

4           And just wanted to get this  
5 clarification of support in the form of -- in writing  
6 from both folks at GNWT and INAC so that we don't go  
7 too far down the road without having it officially on  
8 the record from both parties that -- that this is the  
9 best way to manage and regulate this site.

10           So feel free to provide any background  
11 on this. But I am requesting that both GNWT and INAC  
12 respond in -- in writing just officially stating that  
13 there is some discussions going on behind the scenes  
14 and collaboration behind the scenes and the -- the  
15 federal licence, federal minister, federal inspectors  
16 is supported by both parties.

17           MR. JOEL GOWMAN: Joel Gowman, with  
18 INAC. So I guess, from a proponent perspective, I'd  
19 just like to say that we within INAC CARD support that  
20 approach going forward. It's worked well over the  
21 last couple of years. Since devolution we've had a  
22 really good working relationship both with our GNWT  
23 inspectors and the INAC inspectors.

24           And, obviously, our GNWT counterparts  
25 can follow up with -- with the Board directly. I

1 would suggest that perhaps through the regulatory  
2 process, that that request for INAC's support for that  
3 approach from an INAC regulatory mandate come directly  
4 from the Board to our INAC lands office rather than  
5 directly to CARD as we try to maintain a bit of a  
6 firewall between ourselves and our lands office for  
7 kind of, yeah, obvious reasons.

8                   Just with INAC having that dual  
9 mandate, it's important for us to maintain that  
10 separation of roles. But we can -- we can definitely  
11 give our lands office a heads-up. But for -- for the  
12 record, if that could come from the Board to the INAC  
13 lands office, that would be appreciated.

14                   MR. RICK WALBOURNE: Rick Walbourne,  
15 GNWT. Yes, I'm a little aware -- I am aware that some  
16 conversations have been taking place between AANDC and  
17 GNWT. I'm also aware that it was discussed at a  
18 meeting. I think Nathen might have been at that  
19 meeting with the Land and Water Boards.

20                   So I'm -- I'm glad it's a written  
21 undertaking so I can send that request to the proper  
22 people. I'm not re -- totally plugged in on that side  
23 of things. But it is my understanding that that's the  
24 preferred approach moving forward. And, yeah, we'll  
25 take that as an undertaking. And we'll get something

1 back to you in writing. Thanks.

2

3 --- INFORMATION REQUEST NO. 5: Requesting that both  
4 GNWT and INAC  
5 respond in writing  
6 officially stating  
7 that there is some  
8 discussions going on  
9 behind the scenes  
10 and collaboration  
11 behind the scenes  
12 and the federal  
13 licence, federal  
14 minister, federal  
15 inspectors is  
16 supported by both  
17 parties.

18

19 MR. MURRAY SOMERS: Murray Somers,  
20 INAC. Rebecca, I was just wondering if I could ask  
21 you to clarify something.

22 You said you had recently had -- sat  
23 down and had a meeting. And it sounded like the  
24 approach is going to be one (1) water licence signed  
25 by the federal minister with, I thought you said,

1 federal inspectors.

2                   And so I just was wondering would --  
3 what would GNWT's inspector's role be if we have the  
4 one (1) federal water licence?

5                   MS. REBECCA CHOUINARD:     Rebecca  
6 Chouinard, with the Board. I think that is, in  
7 essence, what we're also trying to get at through the  
8 Information Request.

9                   And my understanding, based on the  
10 meetings that we had, was that there was a  
11 collaborative agreement just through delegated  
12 authorities. And -- and there was something discussed  
13 and worked out that it would still fall under the --  
14 the INAC inspectors and that that was okay with  
15 everybody. And there was some sort of collaboration  
16 happening behind the scenes on that.

17                   So I think that is -- is one (1) of the  
18 points. So which minister and which inspectors and is  
19 there one (1) instrument or two (2)? And I think --  
20 so that's sort of a three (3) point question, just to  
21 get further clarity that everybody is on the same page  
22 with how the licence should be drafted and approved.

23                   MR. JOEL GOWMAN:     Joel, with INAC. I  
24 think, from an INAC CARD perspective, we've -- like I  
25 said before, we've got a good rela -- relationship

1 with both -- both land offices, federal and  
2 territorial. So we would support having it either  
3 federal only inspectors with -- with some sort of  
4 agreement between the two (2) parties or -- or  
5 maintaining the separate inspector roles.

6 As CARD is a proponent again, we  
7 appreciate being part of the discussion but would  
8 defer that recommendation to the Board from our INAC  
9 lands office instead of directly from us.

10 MR. RICK WALBOURNE: Rick Walbourne,  
11 ENR. All I'd ask is that in your Information Request,  
12 because that -- that'll be passed on to the  
13 appropriate people, so be very clear on what you want,  
14 if it's one (1) or two (2) licences or -- or how GNWT  
15 inspectors may or may not play a role under a federal  
16 licence.

17 So just outline exactly what  
18 information you want, and -- and I'll make sure it  
19 gets to the appropriate people, but just be clear on -  
20 - on those different components of that IR that you're  
21 looking for. Thanks.

22 MS. REBECCA CHOUINARD: Rebecca  
23 Chouinard, with the Board. Point well taken. Yeah,  
24 so we'll make sure that we are very clear about --  
25 about that request, number of instruments, who's going



1 to inspect, and which minister is going to sign. So  
2 I'll make sure that those three (3) points are -- are  
3 clarified in the request. And we will send them to  
4 the lands office as per your request, Joel.

5                   Okay, any other questions, suggestions,  
6 comments, point of clarification under general for the  
7 group?

8

9                   (BRIEF PAUSE)

10

11                   MS. SHANNON ALLERSTON: It's Shannon  
12 Allerston, with the Board.

13                   I have a couple just sort of  
14 administrative and, like, wording questions as -- as I  
15 was going through the SNP and annual water licence  
16 reports. And there just seems to be some little  
17 discrepancies, so there might be a few changes in the  
18 draft water licence, and I want to kind of go through  
19 some of them and see what you think about maybe some  
20 of the changes and if they're correct or not.

21                   So I noticed there is an SNP station,  
22 14-1, at Matthews lake. And its purpose right now is  
23 described as monitoring potable water and dust  
24 suppression. But since the first licence was written  
25 there's also been water taken for those purposes from

1 Sandy Lake and Bulldog Lake (phonetic).

2 And I can tell from the water licence  
3 annual reports that those are still being monitored  
4 somewhere, but it no longer seems to be just SNP 14-1  
5 doing that job. Is that correct?

6 MR. MURRAY SOMERS: Murray Somers,  
7 with INAC. Yeah, that -- that is correct. Yeah,  
8 Matthews Lake, and water is withdrawn for -- for camp  
9 use. I won't say potable, but, yeah, for camp use and  
10 dust suppression for sure. Dust suppression though  
11 primarily now comes from Bulldog.

12 And I've never known it to happen, but  
13 I believe it has -- there has been water taken from  
14 Sandy, as well. But I think our control plan dust  
15 suppression section indicates that that is a potential  
16 source, as well yeah.

17 MR. JOEL GOWMAN: Yeah, I believe the  
18 -- the use out of Sandy Lake was -- sorry, it's Joel  
19 speaking again. And Sandy Lake water withdrawals were  
20 primarily associated with dust control on the more  
21 northeasternly section of the roadway out in that  
22 area.

23

24 (BRIEF PAUSE)

25

1 MS. SHANNON ALLERSTON: I guess just  
2 for drafting the new SNP for the water licence we may  
3 look at including whatever monitoring stations are  
4 currently at Bulldog and/or Sandy if there's plans to  
5 continue using those into that SNP 14-1 and be 14-1A  
6 and 'B'. I don't know which monitoring program they  
7 belong to right now because I do see that there -- the  
8 quantities in the volumes of water being taken from  
9 there have been reported.

10 Would that be okay?

11 MR. MURRAY SOMERS: Yeah. Murray  
12 Somers, INAC. Yeah, I -- I don't see any problem with  
13 that, yeah.

14

15 (BRIEF PAUSE)

16

17 MS. SHANNON ALLERSTON: This is sort  
18 of a follow-up to that question. And, like, as I  
19 mentioned, I'm not a hundred percent sure where those  
20 monitoring programs are coming from already. And this  
21 is Shannon Allerston, with the Board, sorry.

22 So there's also all these ground  
23 monitoring -- groundwater monitoring wells and other  
24 monitoring programs that are probably from your  
25 statement of environment or construction monitoring

1 outside the SNP. And I don't know if there's any  
2 benefit or disadvantage to just including them all in  
3 an SNP to have them all in one (1) in place.

4 And I just want to hear your thoughts  
5 on those.

6 MR. MURRAY SOMERS: Murray Somers  
7 here, INAC. Yeah, no, that's something to consider  
8 for sure because, yeah, all the groundwater  
9 monitoring, you're right, it comes from that SENES  
10 2011 construction monitoring, so. And it's -- and  
11 it's only strictly for -- for when there's  
12 construction activities happening, so, like, PHC  
13 excavation and -- and tailings and waste rock  
14 excavations and water treatment, I think. Anyway per  
15 -- maybe not. But, anyway, I'd have to double-check  
16 that. But, yeah, that's where it comes from.

17 And we will have one (1) to two (2)  
18 more years of those activities happening, right. So,  
19 yeah, moving them into one (1) SNP program, I don't  
20 see the problem with that as long as it's, you know,  
21 kept as a construction activity type of scenario,  
22 right, where -- yeah, when -- when those specific  
23 activities that are listed in SENES 2011 are  
24 happening, then -- then, yeah, you'd monitor as per  
25 the frequency sort of thing, right?

1           And just to -- to let you know, too, if  
2 you're not aware already, a lot of the groundwater  
3 monitoring stations that are listed, some of them have  
4 been destroyed intentionally, right. They were placed  
5 in the middle of the tailings and -- and we knew that  
6 they were going to be destroyed during the excavation.

7           So -- so some of them have --  
8 literally, they're gone. And a lot of them were  
9 monitoring seeps and that sort of thing, as well,  
10 which have dried up. So -- so we have a lot -- a lot  
11 of trouble, even though the station's still there,  
12 actually getting enough water to sample, and so an  
13 awful lot of times, we -- we can't. There's not  
14 enough water in -- in the wells. So -- so that'll be  
15 one (1) thing that's going to come from us in August  
16 when we review the water licence as -- a suggestion  
17 we remove some of those groundwater wells.

18           But from an administrative perspective,  
19 yeah, that would be simple to look at one (1)  
20 document, yeah.

21

22                               (BRIEF PAUSE)

23

24           MS. SHANNON ALLERSTON:    This is  
25 Shannon Allerston, with the Board again.

1                   So I guess this could probably be added  
2 to something that you're already completing for us  
3 with the current SNPs. If maybe we had a list of sort  
4 of all the monitoring stations you have, what their  
5 purpose I, and, I guess, triggers for getting rid of  
6 them as we move forward so we can built it into the  
7 water licence, as well.

8                   MR. MURRAY SOMERS:    Yeah, Murray  
9 Somers, INAC. Yeah, that -- that sounds reasonable.  
10 It sounds like something we could easily do.

11                   MS. REBECCA CHOUINARD:    Wonderful.  
12 Rebecca Chouinard. I've added that as another  
13 Information Request. I believe it's the sixth.

14                   I've been paying attention. Great.  
15 Okay, thank you.

16

17 --- INFORMATION REQUEST NO. 6: Provide a list of all  
18                   the monitoring stations,  
19                   what their purpose is, and  
20                   triggers for getting rid  
21                   of them

22

23                   MS. REBECCA CHOUINARD:    I think we  
24 just have one (1) more question from the Board. Okay.  
25 We just have one (1) last question, I think, if --

1 yeah, you guys. Okay.

2 MS. HEATHER SCOTT: I'm just  
3 wondering. In the groundwater monitoring you have  
4 onsite, is any of that built around your sewage  
5 treatment system? Because I believe you said it's not  
6 lined in a lot of -- there's probably some  
7 infiltration or sometimes they're called exfiltration  
8 lagoons, for some reason. I've never figured that  
9 out.

10 Yeah, is there any -- is there any  
11 monitoring of that system by groundwater at this time?

12 MR. MURRAY SOMERS: Murray Somers,  
13 INAC. The answer is no. No, there's no groundwater  
14 monitoring wells around the sewage treatment area.

15

16 (BRIEF PAUSE)

17

18 MS. REBECCA CHOUINARD: Okay, Rebecca  
19 Chouinard, Board staff. Last chance for anyone in the  
20 room on anything. Just double-checking. Is there  
21 anybody on the phone? Any last thoughts or comments  
22 from INAC staff?

23 MR. JOEL GOWMAN: Yeah, Joel Gowman,  
24 with INAC. I just wanted to again thank the Boar --  
25 the Board staff for giving us this opportunity to

1 review our project with you guys. And I know that  
2 you're -- you're also working quite -- quite  
3 diligently at shortening up some -- working on some  
4 fairly tight time lines and that.

5 Murray and I were just discussing some  
6 of our current field travel, and also getting the  
7 appropriate input from our consultants if the IR  
8 response date could be revised from the 28th to the  
9 29th, if that would -- if we can still make that work  
10 within your schedule?

11

12 (BRIEF PAUSE)

13

14 MS. REBECCA CHOUINARD: Rebecca  
15 Chouinard, from the Board. Just wondering if there  
16 are any folks around the room that have any objections  
17 to this being as interventions are due on July 5th?

18 MR. RICK WALBOURNE: Rick Walbourne,  
19 ENR. No, no problem.

20 MR. SHIN SHIGA: Shin Shiga, North  
21 Slave Metis Alliance. No issues.

22 MS. REBECCA CHOUINARD: Rebecca  
23 Chouinard here. I think that we can make that work,  
24 so that's fine. We'll clarify that when we send all  
25 of the Information Requests out to the distribution



1 list.

2 Anything else from INAC?

3 MR. MURRAY SOMERS: Murray Somers,  
4 INAC. Yeah. I'd like to echo what Joel said. Thanks  
5 for allowing us to come and explain everything for you  
6 guys. Yeah, this was my first technical session, so  
7 I'm very pleased.

8 And the message is -- is loud and clear  
9 to -- to CARD here that with these Information  
10 Requests we're to respond with the appropriate  
11 information. And -- and we'll do our best to make it  
12 as useful for drafting condition licences, as well,  
13 right, yeah. So that message has been received.  
14 Thanks.

15 MS. REBECCA CHOUINARD: Perfect.  
16 Rebecca Chouinard here, with the Board. I just want  
17 to quickly go over the -- the final three (3) IRs of  
18 the day.

19 Number 4 was that list of div --  
20 deliverables that are to be -- being developed by  
21 consultants or the INAC team that could help inform  
22 the water licence conditions. And that was to be a  
23 conceptual list of information that you have as it  
24 would help, yeah, define some -- some trigger dates or  
25 activities in terms of other plans required by the

1 licence.

2                   The fifth one was an Information  
3 Request to INAC lands office and GNWT. And that was  
4 for a clarification on the federal and non-federal  
5 components of this project, specifically whether there  
6 should be one (1) or two (2) regulatory instruments,  
7 which inspectors, and which minister for sign-off.

8                   And the final Information Request of  
9 the day, the sixth one, was a list from INAC of all  
10 monitoring stations and the purpose that those  
11 stations serve that are not currently part of the SNP.

12                   I believe in an earlier Information  
13 Request about SNP stations you were also going to  
14 clarify which SNP stations you think no longer apply,  
15 and the re -- reasons for that, as well.

16                   Oh, and the same for -- sorry, just to  
17 clarify this last Information Request. So the list of  
18 monitoring stations and the purpose they serve right  
19 now, the ones that are not part of the SNP, and  
20 whether you want to get rid of any of those non-SNP  
21 monitoring stations and -- and the rationale.

22

23   (BRIEF PAUSE)

24

25                   MS. REBECCA CHOUINARD:    Okay.  So, as

1 promised, we'll get those Information Requests out to  
2 all parties ideally by the end of today, tomorrow at  
3 the latest. We'll clarify the new due date of the  
4 Information Request as the 29th of June.

5           Once again, written interventions are  
6 due July 5th, proponent's responses July 8th,  
7 Intervenor public hearing presentations due July 14th,  
8 INAC's due the 14th. And the public hearing is  
9 scheduled for July 28th.

10           We will attempt to get the pre-hearing  
11 conference agenda out today or tomorrow, as well. And  
12 that is scheduled for June 30th.

13           So with that, I'd like to thank  
14 everybody for taking the time, INAC CARD team for all  
15 your hard work putting together these presentations  
16 and answering questions and the reviewers for the time  
17 that you put in with your recommendations and points  
18 of clarification much appreciated. It really helps  
19 our process along. And I look forward to the -- the  
20 rest of the process.

21           Rick, you wanted to say something?

22           MR. RICK WALBOURNE: Rick Walbourne,  
23 ENR. Sorry, I just want to do just a little bit of a  
24 closing comment here regarding interventions and --  
25 and next phases of the process.

1 I think, from ENR's perspective, we  
2 raised a few points there during the initial review.  
3 And we're very comfortable with the information and  
4 the responses that were -- that were provided by CARD.  
5 As such, I don't anticipate that a formal intervention  
6 is going to be provided by ENR. And I think from some  
7 comments from DFO, and from speaking to them as well,  
8 it seemed that they're leaning in the same direction.

9 So in place of an intervention we can  
10 make a formal submission to that effect to say that  
11 we're -- that we have no further concerns with the  
12 process. As such, we'll be make -- making no  
13 recommendations in terms of if a hearing proceeds, if  
14 -- the Land and Water Board is still welcome to  
15 request GNWT's presence if you have questions say  
16 specifically on -- on the IR and some of that -- that  
17 aspect of GNWT.

18 But I guess depending on the IR  
19 response and what happens after that, you can make --  
20 you can make a decision on that end. But just  
21 regarding technical recommendations and that -- on  
22 that side of it, I don't anticipate much more from --  
23 from ENR in that regard.

24 So I just wanted to -- to let you guys  
25 know that at this point so you can -- as you were

1 planning a further line of process. Thanks.

2 MS. REBECCA CHOUINARD: Thanks, Rick.

3 Rebecca Chouinard, with the Board. That's certainly

4 helpful information. Of course, as per the

5 legislation, we are not able to cancel a public

6 hearing until ten (10) days prior to its scheduled

7 date. So we do have that marked down as July 18th.

8 So we'll -- we will be very interested

9 in -- in the various reviewers' takes on whether or

10 not they would like to participate in a public hearing

11 or participate in some other sort of written

12 proceeding.

13 So we will be canvassing folks for

14 their thoughts on that at the pre-hearing con --

15 conference on the 30th, but that's really helpful

16 information to know. And I think we'll have to just

17 stand by and wait for that magical date to -- to

18 finalize any plans on having or -- or not having the

19 public hearing.

20 Did anybody else want to make any final

21 remarks or statements before we close out for the day?

22 It doesn't look that way. So again, thank you to

23 everybody. And I look forward to the next stage of

24 the process. Have a good afternoon.

25

1 --- Upon adjourning

2

3

4

5 Certified Correct,

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10 Wendy Woodworth, Ms.

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<u>0</u>	<b>1.2</b> 15:12	179:7,8	146:14	136:18
<b>02</b> 79:15	17:19 21:5	<b>150</b> 28:3,13	167:19	140:20
<b>08</b> 40:19	34:1	62:15,16	168:4,14	141:10
68:21	79:13,24	<b>154</b> 5:13	172:17	<b>2017</b> 24:2
<b>09</b> 40:19	<b>1.5</b> 17:15	<b>16,000</b> 19:24	178:6	117:13
86:13	71:14	<b>165</b> 5:21	<b>20</b> 26:13	118:16
	<b>1.5-metre</b>	<b>17</b> 93:8	72:22 73:3	119:5
	56:11	<b>174</b> 5:24	<b>20,000</b> 83:25	125:14
<u>1</u>	<b>1.6</b> 79:18	100:20	<b>2000</b> 38:11	126:2
<b>1</b> 4:3 9:11	<b>1:15</b> 129:14	102:3	158:12	151:3
20:8 26:11	132:2	<b>18</b> 47:15	<b>2007</b> 36:18	152:5
28:18	<b>10</b> 15:17	<b>182</b> 3:21	<b>2008</b>	160:2
34:4,25	63:15	93:8	36:17,18	<b>2018</b> 47:14
35:10	83:25	103:18,22	37:5 45:3	119:23
43:10 46:1	98:18	104:4	52:18	151:8
47:10 52:4	129:12	<b>18th</b> 8:3	64:25 79:4	<b>2019</b>
68:12	163:18	181:7	92:2	24:5,8,11
70:25	181:6	<b>19</b> 100:20	<b>2008/2009</b>	27:8 32:20
73:13 74:3	<b>10:30</b> 7:7	<b>1983</b> 14:2	33:8	36:10
75:2,18	77:5,9	<b>1987</b> 14:2	<b>2009</b> 16:18	<b>2020</b> 36:7
76:2 79:11	<b>10:45</b> 77:7	<b>1992</b> 14:16	33:7 82:16	47:3,15
84:14,24	<b>100</b> 73:4	<b>1999</b> 14:17	87:3,15	103:20
85:8 86:12	74:12		89:13	141:16
88:14,15	<b>100,000</b>	<u>2</u>	<b>2010</b> 12:17	<b>2023</b> 24:20
93:9 99:5	25:13	<b>2</b> 4:15 14:1	78:21	25:3 32:20
100:14	28:16	21:1 22:17	<b>2011</b>	36:10
101:10	<b>105</b> 3:15	24:4 31:3	158:14,22	140:14
102:17	<b>10th</b> 8:4	56:6 65:17	172:10,23	<b>2024</b> 24:24
105:9	<b>11</b> 3:4	72:3	<b>2012</b>	140:17
114:1	<b>112,000</b>	73:21,22,2	102:10,16	<b>23</b> 1:22
115:5,8,11	17:25	3 79:11,16	122:25	<b>23rd</b> 8:6
119:25	<b>11th</b> 8:17	81:5,6,7,8	<b>2013</b> 13:10	136:18
122:24	<b>132,000</b>	82:4,13,18	59:5	<b>24</b> 68:9
123:4	59:12,20	,21	66:1,12	<b>240</b> 13:21
129:16	<b>135</b> 70:5	83:1,9,12	69:23 71:4	<b>25</b> 18:13
135:8	<b>135,000</b>	84:13	<b>2014</b> 19:10	<b>28th</b> 8:10,19
138:11	15:21 70:6	85:11,15	20:15,17	96:17
140:25	<b>140</b> 3:18	86:14,22	23:19 69:8	136:18
144:4	<b>14-1</b> 169:22	89:20	<b>2015</b> 23:19	148:19
146:18	170:4	90:23	69:1,9	176:8
147:3	171:5	100:22	88:25	179:9
150:10	<b>14-1A</b> 171:5	101:15,20	<b>2016</b> 1:22	<b>290,000</b> 15:6
159:24	<b>142</b> 3:19	103:16	8:3	<b>29th</b> 176:9
162:7	<b>14-6H</b> 94:20	109:20	23:12,19	179:4
163:16	<b>14th</b> 8:18	124:7	42:9	<u>3</u>
164:2		138:11	93:2,8	<b>3</b> 5:3 7:3
166:24		143:23	94:10	68:15
167:4,17,1		144:10,14	101:3	
9 168:14			126:5	
172:3,17,1				
9				
173:15,19				
174:24,25				
178:6				

69:19	86:15	123:19	<b>g</b> 11:16	147:16
79:4,11	93:10	<b>86</b> 3:11	<b>according</b>	148:7
85:16	102:20	<b>8th</b> 8:16	64:6	149:18
97:12	132:18	179:6	100:24	152:4
109:1	138:12	<hr/>	136:17	172:12,18,
112:6,14,1	140:14	9	<b>account</b> 87:1	23 177:25
5 116:13	166:3	<hr/>	<b>accurate</b>	<b>activity</b>
136:15	<b>5)-ten</b>	<b>9:00</b> 6:1	15:9 38:16	27:24
139:5	129:11	<b>90</b> 4:24	92:17	65:23
167:20	<b>50</b> 28:16	101:17	151:21	66:12
169:2	72:22 73:3	124:22	<b>achievable</b>	67:10,11,1
177:17	79:17	125:3	94:3,7	7 138:14
<b>300</b> 27:25	112:16	126:6	<b>achieve</b>	145:16,17
29:9	<b>500</b> 79:18	151:19	82:13	148:4
62:8,10,18	<b>55</b> 3:7	<b>97</b> 5:10	89:20	151:19
,24 67:25	<b>56,000</b> 25:11	<b>99</b> 3:14	<b>achieved</b>	172:21
68:2,3	<b>5-kilometre</b>	<hr/>	29:16 30:2	<b>activity-</b>
<b>30th</b> 8:12	14:22	A	<b>acid</b>	<b>based</b>
179:12	<b>5th</b> 8:14	<b>a.m</b> 6:1 77:9	15:20,25	149:16,17
181:15	96:13 97:4	<b>AANDC</b> 165:16	48:21	158:21
<b>32</b> 77:25	176:17	<b>able</b> 33:20	<b>acid-</b>	<b>actual</b> 8:25
<b>39</b> 3:5	179:6	38:16 65:3	<b>generating</b>	58:13 61:7
100:16	<hr/>	73:8 74:23	49:4	65:23
<hr/>	6	82:13	<b>acronym</b>	101:8
<b>4</b> 5:11 63:14	<b>6</b> 4:13 5:22	89:20 92:4	43:22	118:3,23
69:19	33:13	95:2,3	<b>across</b> 70:15	122:5
79:12	46:18	112:20	75:3	125:12
82:19	108:23	119:11,15	<b>act</b> 60:20	<b>actually</b>
151:20	109:19	125:14	125:25	14:4,8
152:3	137:10	127:25	<b>action</b> 40:24	17:3,14
154:18	174:17	132:10,24	42:6 43:11	18:2
160:1	<b>60</b> 18:10	147:25	45:18	20:9,21
177:19	<b>60,000</b> 28:20	149:8	111:1	22:25 25:4
<b>440</b> 56:12	<b>64</b> 3:8 14:1	152:4	<b>actions</b>	26:15
<b>442.5</b> 56:10	<b>68</b> 14:1	153:7,25	162:13	28:4,12
59:22 60:4	<b>6th</b> 8:3	181:5	<b>activation</b>	49:1,15
<b>45</b> 13:25	<hr/>	<b>Aboriginal</b>	4:24 5:7	51:22
<b>450</b> 62:22	7	41:9	91:12	52:23 54:8
<hr/>	<b>7</b> 15:17 25:2	<b>absolutely</b>	97:19	55:18 56:3
<b>5</b> 5:14 24:12	63:14	53:8	138:1	57:8 58:5
26:8,10,14	155:24	100:15	139:8	59:6
32:2,19	<b>77</b> 3:10	123:18	<b>activities</b>	61:1,5,10
33:13	<hr/>	<b>acceptable</b>	28:6 49:12	68:7
48:10,17	8	160:1	53:1 67:6	71:6,12
79:17 82:7	<b>8</b> 98:18	<b>accommodatin</b>	81:4	73:18 75:1
83:14	133:4	<b>g</b> 96:3	104:15	81:24
84:20,23	<b>80</b> 18:1	<b>accomplished</b>	121:18	82:15 84:9
85:1,6,12		117:3	138:16	85:10,14
		<b>accomplishin</b>		86:14
				88:14
				92:16
				93:11
				102:11,16



103:10	7:24 9:2	96:19	132:17	38:5,25
105:3	35:23 50:2	105:10	140:5	39:4 47:2
109:5	59:21	<b>advice</b> 66:14	161:23	57:15 71:9
112:19	66:19	156:8	<b>air</b> 14:21	100:21
138:25	74:22	<b>advise</b>	<b>airstrip</b>	145:6
140:8	83:14	131:14	25:20	148:8
154:12	96:21	<b>advised</b>	94:22	149:22
173:12	115:10	108:7	129:24	150:22
<b>adaptive</b>	116:4	<b>advisors</b>	131:16	154:10
13:1,18	126:1	108:10	<b>align</b> 150:23	171:20
24:6,11	138:17	115:14	152:23	173:2
27:10,16	145:10	129:16	153:7	174:2
28:22	149:3	130:9	154:11	<b>alternative</b>
30:5,6	156:25	<b>AECOM</b> 49:24	<b>Allerston</b>	110:11
31:1,10,25	157:13	51:7,15,19	2:5 10:2,4	<b>alternatives</b>
32:24	<b>address</b>	,21 72:16	135:17,18	80:20
34:9,17,19	46:23 66:3	120:5	169:11,12	<b>am</b> 6:8
,23 35:10	<b>addressed</b>	<b>affected</b>	171:1,17,2	164:11
36:9 47:20	11:25	81:12,15	1	165:15
104:8	32:11	<b>affecting</b>	173:24,25	<b>ame</b> 93:13
116:15,22	41:15	40:22	<b>alleviate</b>	<b>amendment</b>
138:12	53:10 59:6	<b>afternoon</b>	150:21	13:10 59:4
140:13,17	65:22	7:7 132:9	<b>alley</b> 6:24	65:11,19
141:21	66:10,20	134:4	<b>Alliance</b>	67:10
143:1,6,23	68:5	181:24	135:14	93:13
,25	<b>addressing</b>	<b>afterwards</b>	176:21	95:5,11
144:15,18,	41:15	21:7 24:7	<b>allow</b> 47:18	104:13
23	107:21	<b>against</b> 37:3	51:14 53:3	<b>amount</b> 15:10
146:17,25	<b>adds</b> 50:10	44:14	61:1	53:11
147:3,13	<b>adjacent</b>	<b>agenda</b> 7:10	118:15	61:14
150:3	14:5,7	8:12,20	<b>allowance</b>	69:25
154:3	17:11	9:10 12:1	113:7	72:11
156:1,23	57:19	54:17	<b>allowed</b>	73:25
158:1,7,15	<b>adjourning</b>	142:9	60:10 61:7	75:23
,23 159:13	182:1	179:11	78:16	103:7
<b>adaptive's</b>	<b>adjusting</b>	<b>agendas</b> 7:12	<b>allowing</b>	<b>amounts</b>
32:17	130:3	<b>AGGRA</b> 140:20	177:5	17:23
<b>add</b> 17:22,23	<b>adjustments</b>	141:10	<b>allows</b>	21:12
43:8,9	53:3	143:15	121:15	29:14
73:12	<b>admin</b> 9:22	<b>ago</b> 21:24	<b>alluding</b>	<b>analysed</b>
115:10	<b>administrati</b>	154:8	107:14	80:10
147:8	<b>ve</b> 169:14	<b>agreement</b>	<b>already</b>	<b>analysis</b>
<b>added</b>	173:18	167:11	12:2,15,19	49:25
174:1,12	<b>admit</b> 50:13	168:4	13:15	<b>analyzed</b>
<b>adding</b> 80:24	<b>advance</b>	<b>ahead</b> 23:9	21:11	82:23
106:20	95:19	39:19	22:18	<b>and/or</b>
<b>addition</b>	127:22	64:17	25:17	113:21
73:15	153:25	125:9	27:14	171:4
90:12	<b>advantage</b>		37:11	<b>annual</b> 4:9
107:18				21:7 25:10
127:7				
<b>additional</b>				

32:5	181:20	43:1 67:9	166:24	16:9,10
34:3,8	<b>anyhow</b> 149:9	<b>appendixes</b>	<b>appropriate</b>	17:5
35:14,17	<b>anymore</b> 32:5	43:10	92:20	18:1,7,11,
46:11 83:1	80:4	<b>applicable</b>	104:4	16,17
88:12 89:6	<b>anyone</b> 54:12	4:18 91:4	119:17	20:20,25
116:18,20	163:9	101:11	138:20	21:16,19,2
137:7	175:19	137:22	141:19	1 22:7
140:22	<b>anything</b> 9:5	138:18	168:13,19	23:6,7
143:12	20:10	<b>application</b>	176:7	30:10
150:15	25:25	8:2,4 9:9	177:10	49:14
153:8	31:7,17	12:15,24	<b>approval</b>	50:1,23
157:25	43:8	13:9,10	113:21	57:12,13
169:15	62:11,12	27:12 39:1	120:20	58:12
170:3	69:24 70:9	43:12	123:4,13	60:15
<b>annually</b>	78:8 92:14	63:6,9,15,	124:22	72:19
99:12	100:5	23 65:16	127:19	74:15
<b>answer</b> 43:16	121:1	66:10	<b>approvals</b>	79:23 82:4
45:15	134:3	69:22	24:21	84:2 102:6
73:10	147:8	70:23	113:10	103:5,8
175:13	148:24	92:21	127:21	104:15
<b>answering</b>	154:14	104:13,22	<b>approve</b>	107:24
179:16	175:20	105:18	106:18	111:21
<b>anticipate</b>	177:2	121:23	110:4	112:21
51:18	<b>anytime</b> 38:7	125:7	<b>approved</b>	170:22
52:13 73:6	<b>anyway</b> 12:5	155:19	100:21,24	175:14
85:2	18:17	156:11	101:23	<b>areas</b> 17:2
108:17	25:24	<b>applications</b>	102:4	19:12
155:15	30:16,24	66:7	106:13	22:17 50:1
180:5,22	33:2 34:20	104:12	122:24	65:17,19
<b>anticipated</b>	37:16	<b>applied</b>	167:22	72:24 74:7
19:1 28:18	42:24	28:4,12	<b>approximatel</b>	76:2,5
32:19	88:17	125:4	<b>y</b> 17:24	138:14
36:7,11	92:11,20	<b>applies</b>	56:9	158:3,4
47:10,14	102:15	101:16	59:12,19	163:21
60:2 85:6	123:21	<b>apply</b> 34:14	73:21	<b>area's</b> 22:6
109:18	140:17	178:14	103:9	<b>aren't</b> 41:1
124:2	152:20	<b>appreciate</b>	<b>aquadam</b>	138:25
<b>anticipating</b>	153:10	93:22 96:4	59:10	149:19
49:9 64:23	172:14,15	99:1 111:4	60:14,18	152:18
70:21	<b>apologies</b>	117:10,18	61:5,7,10,	<b>armoury</b>
71:24	55:8 57:3	131:12	19,24	102:18
108:22	99:17	168:7	<b>aquatic</b> 37:4	<b>arrived</b>
<b>anybody</b> 13:5	<b>apologize</b>	<b>appreciated</b>	81:8	161:25
44:7 52:4	50:15	165:13	103:25	<b>arsenic</b>
77:25	54:24	179:18	<b>aquatics</b>	15:10
102:2	<b>appear</b>	<b>approach</b>	34:24	37:12
105:21	142:18	49:6 78:12	35:3,13	78:20
129:2	<b>APPEARANCES</b>	98:3 149:9	<b>ARD</b> 49:10	79:14 80:8
134:25	2:1	164:20	<b>area</b> 14:22	81:5,13
136:8	<b>appendix</b>	165:3,24	15:2	82:1,2
175:21				84:21
				<b>arsenic-</b>

<b>impacted</b> 78:13	157:25	85:13	107:15	167:16
<b>arsenic-rich</b> 15:6	<b>assumption</b> 126:25	<b>averaged</b> 66:7	115:14	<b>believe</b> 35:5,25
<b>as-built</b> 119:23	<b>assumptions</b> 38:13	<b>averages</b> 66:8	136:23	51:23
<b>aspect</b> 93:25	52:18	<b>avoid</b> 75:3	137:2	54:18
180:17	120:12,21	95:11	141:3	69:1,5
<b>aspects</b>	123:9	154:14	147:14	72:21 73:4
65:14	<b>Astrid</b> 2:11	<b>avoiding</b>	157:11	78:2 79:11
72:19	9:21	93:13	159:2,9	82:18
95:19	<b>attached</b>	<b>awarded</b>	167:9	88:21
117:17	67:9	118:14	<b>baseline</b> 4:9	100:19
<b>assessed</b>	<b>attempt</b>	<b>aware</b> 75:16	33:4 34:11	110:18
79:5 80:8	86:21	120:22	35:19 36:4	112:15
<b>assessment</b>	148:25	165:15,17	46:11	114:21
4:8 15:5	152:12	173:2	80:18	170:13,17
16:7 35:22	160:25	<b>away</b> 49:6	98:12	174:13
36:17	179:10	108:1	137:6	175:5
42:3,8	<b>attempted</b>	<b>awful</b> 34:22	141:1	178:12
43:15	8:22	36:11	149:17	<b>belong</b> 171:7
45:2,3	<b>attention</b>	173:13	159:8	<b>benefit</b>
46:10	31:8	<hr/>	<b>bases</b> 114:17	76:12
52:19,25	174:14	<b>B</b>	<b>basically</b>	111:8
71:13	<b>August</b>	<hr/>	35:7 57:21	116:11
94:10	20:15,16	<b>backfilling</b>	60:19	156:21
137:6	33:18	75:21	71:20 78:6	172:2
150:15	159:1	<b>background</b>	144:9	<b>berm</b> 22:25
158:11	173:15	8:1	158:12,14	23:2
<b>assessments</b>	<b>authorities</b>	14:9,14	159:7	<b>berms</b>
58:16	167:12	41:1 42:2	<b>basins</b> 72:3	19:6,17
<b>assist</b> 19:7	<b>authorizatio</b>	89:9 90:13	<b>basis</b> 31:12	109:10
116:13	<b>n</b> 11:16	163:19	83:1,2	111:21
126:22	<b>authorizatio</b>	164:10	<b>became</b> 14:18	<b>best</b> 42:6
<b>assistant</b>	<b>ns</b> 95:17	<b>bacterial</b>	<b>becomes</b> 43:6	80:11
9:22	<b>authorized</b>	107:22	<b>bedrock</b>	82:22
<b>associated</b>	83:13	<b>balance</b> 50:3	71:22 72:2	90:4,5
4:17 8:23	<b>available</b>	51:11,24	<b>begin</b> 9:7	110:11
55:11 91:2	39:11	76:19	<b>beginning</b>	115:19
114:15	42:10,13	153:22	31:3 35:7	130:9
116:24	63:16	158:9	37:22	145:21
131:21	80:11	<b>base</b> 60:11	55:23	156:8
137:21	82:10,22	72:2 122:5	123:10	157:11,21
170:20	115:19	<b>based</b> 4:3	<b>begun</b> 128:13	161:10
<b>assume</b> 98:12	127:10	34:14	<b>behalf</b> 108:9	164:9
<b>assumed</b>	129:11	35:19	<b>behaving</b>	177:11
59:17	132:9	43:21 46:2	144:19	<b>better</b> 66:24
<b>assuming</b>	<b>average</b> 83:1	70:1 80:13	<b>behind</b>	70:14
137:14	84:23	87:22	5:17,18	89:24
		92:14	163:25	93:25
		98:21	164:13,14	96:21
			166:9,11	110:19
				111:1
				140:16

151:4	11:13	134:2,24	78:10	<b>briefly</b>
<b>beyond</b> 131:5	12:19 20:4	135:16,18,	<b>boss</b> 49:3	13:11
<b>bigger</b> 133:9	27:13	21,23,25	<b>bottom</b> 84:6	<b>bring</b> 9:5
<b>birds</b> 35:4	42:23	136:13	<b>boxes</b> 24:19	45:8
<b>bit</b> 11:14	43:5,14,16	139:4,16	<b>breached</b>	59:13,17
12:4 13:24	44:8,10	142:8,12,1	138:9	68:8
15:8 17:15	45:5 46:22	9,24	<b>breaching</b>	130:24
18:2	48:3	143:22	15:18	<b>bringing</b>
20:15,21	51:6,18	144:25	<b>break</b> 7:6	109:24
21:9	52:8 54:3	145:4	45:8 77:5	<b>brings</b> 8:5
22:11,14,2	72:8,9,11	146:8	79:7 96:19	<b>broken</b> 8:20
0 23:24	74:10	147:22	97:10	<b>brought</b> 14:6
25:18	76:10,22	148:17	129:6	27:11 62:2
26:6,12,22	77:4 86:5	150:19	132:1,7	66:1 75:8
27:13 28:5	87:9,10,13	151:15	134:11	92:1
29:18	89:3	155:1,4,6	139:19	106:16,19
30:15,24	90:9,11	156:7,9,17	<b>breaks</b> 7:5	127:18
33:2 43:20	91:16	159:12,16	<b>bridge</b> 38:3	<b>buffer</b> 85:17
48:7 55:9	92:23 93:4	160:1,10,2	129:24	<b>build</b> 25:21
58:3 60:5	94:15	4 161:16	<b>bridges</b>	56:18
66:5 70:17	95:1,2,3,1	163:1,5,16	101:15,16	58:21 61:2
73:13 79:8	4,21,24	164:25	130:7	<b>building</b>
90:13,17,2	96:7	165:4,12	<b>brief</b> 10:22	28:10
0 94:17	98:5,10,22	167:6	52:1 77:1	120:6
95:6 96:8	99:5,9,15	168:8,23	87:25 88:6	<b>buildings</b>
98:7	105:12,16,	169:12	99:19	16:16
107:11	19	171:21	108:13	<b>builds</b>
118:19	106:7,9,12	173:25	111:10	118:22
121:22	,17,18	174:24	115:22	<b>built</b> 22:5
129:9	108:4,7,8,	175:19,25	128:23	30:11 33:7
136:22	10,16	176:15	139:13	174:6
144:3,20	109:13,14,	177:16	140:6	175:4
146:23	16	180:14	142:21	<b>bulk</b> 14:14
147:4	110:2,3,5,	181:3	143:19	17:6
150:21	6,25 111:7	<b>Boards</b>	146:5	<b>Bulldog</b>
156:19	113:10,17,	165:19	148:21	170:1,11
159:6	21,22	<b>Board's</b>	151:12,24	171:4
161:23	114:10,21,	93:22 99:2	152:7	<b>busy</b> 100:15
163:19	23	107:9,14	156:14	<b>button</b> 35:13
165:5	115:1,14,1	128:13	159:21	<b>Bye-bye</b>
179:23	7,25 116:6	<b>BOD</b> 110:17	160:7,21	134:14
<b>bits</b> 20:11	117:6,19,2	<b>body</b>	161:13,20	<hr/>
63:2	3 120:9	112:3,5,23	163:13	C
<b>bituminous</b>	122:17,22	113:5	169:9	<b>camp</b> 14:23
18:11	124:11,14,	114:6	170:24	21:19 28:7
102:7	17,22	<b>bonus</b> 102:25	171:15	31:18 57:9
<b>Boar</b> 175:24	125:15,24	103:3,7,11	173:22	58:4 109:9
<b>Board</b> 1:3	126:16	<b>borrow</b>	175:16	
6:10 9:25	127:18,21	18:16,17	176:12	
10:3,4,6,7	128:5	103:5,8	178:23	
,9,11	129:1,16	<b>borrowed</b>		
	130:9,13,2			
	1 131:6,22			
	132:1			
	133:16			

170:8,9	5:11 6:5	109:1	121:9,14	115:25
<b>Canada</b> 9:18	33:21	112:13	127:17	120:8
40:8 105:7	42:11 43:4	<b>centimetres</b>	133:8	123:1
106:19	68:5 69:23	15:17	145:17	124:13
123:24	76:21	<b>certain</b>	169:17,20	126:15
<b>Canada-wise</b>	87:5,16,23	41:13	<b>changing</b>	128:4
37:3	88:2 90:20	114:20	25:18	129:1
<b>cancel</b> 181:5	93:1	117:1,16	49:21	130:12
<b>canvass</b>	94:15,18	138:16	<b>channel</b> 23:3	134:19,23
105:21	97:14	146:20	29:12	135:22,23
142:14	127:19	150:3	56:18,21	136:7
<b>canvassing</b>	136:6	156:24	58:22	138:7,8
181:13	148:1	158:3,4	60:12	139:15
<b>cap</b> 16:10	154:18	<b>certainly</b>	61:3,5,8,1	142:7
18:9,15	162:11,22	181:3	2 62:5	144:24,25
19:11	164:19	<b>Certificate</b>	72:1,12,20	147:21,22
21:17	165:5	3:21	,24,25	148:16,17,
25:22	167:24	<b>Certified</b>	73:1	23,24
26:16	168:6	182:5	74:6,13	152:9,10
27:3,4	177:9	<b>challenge</b>	76:11,14	154:4,5,25
32:9 48:19	179:14	75:5,9	<b>channels</b>	156:16,17
57:14	180:4	84:11	26:17,18	160:23,24
102:12,17,	<b>CARD's</b> 137:8	<b>challenges</b>	30:10	161:15,16,
21 103:7	<b>care</b> 23:20	75:2 83:14	75:13	22 162:25
117:24	103:14	107:12	102:21	163:1,15
119:14,16	145:3	130:15	<b>channel's</b>	167:5,6
121:8,12	<b>careful</b>	155:25	60:9	168:22,23
123:20	57:22	<b>chance</b> 6:7	<b>characterist</b>	174:11,12,
127:15	<b>carry</b> 155:23	33:19	<b>ics</b> 49:5	23
<b>capabilities</b>	<b>case</b> 29:22	125:25	<b>check</b> 43:19	175:18,19
9:19	37:7 59:18	175:19	77:13 88:3	176:14,15,
<b>capability</b>	<b>catch-all</b>	<b>change</b> 78:8	<b>checking</b>	22,23
39:16	9:4	102:4	127:8	177:15,16
<b>capacity</b>	<b>catchment</b>	107:6	<b>chemical</b>	178:25
16:24	51:11,12	120:20	89:23	181:2,3
<b>capped</b> 20:19	60:3	121:25	<b>chemistry's</b>	<b>chuckled</b>
21:23 74:8	76:3,5	122:1,3,12	49:20	99:14
<b>capping</b>	89:22	149:19	<b>chlorination</b>	<b>circulated</b>
21:18	<b>category</b> 9:5	155:15	106:24	149:3
<b>capture</b> 8:22	163:9	<b>changed</b>	107:18	<b>clarificatio</b>
134:5	<b>cause</b> 41:16	20:15	<b>chlorine</b>	<b>n</b> 40:4
<b>captured</b>	<b>CCME</b>	65:14,18	106:21	54:11 72:5
49:15	37:3,7,15	66:14,16	110:14	74:4 93:6
135:6	38:7 44:14	104:11,20	<b>Chouinard</b>	108:5
<b>captures</b>	45:1	<b>changes</b>	1:13 2:3	111:5
10:25	92:4,11,20	52:14,21	6:8 10:8	114:1
<b>CARD</b> 1:8	<b>cell</b> 109:1	89:23	43:18 54:2	128:21
2:11 4:3	112:14,15	95:3,4	77:4 86:5	138:23
<b>cells</b> 50:17	<b>cells</b> 50:17	104:24	90:10 93:4	142:16
		120:16	96:6 108:3	145:23
				153:16
				163:17
				164:5
				169:6

178:4 179:18 <b>clarifications</b> 66:18 <b>clarified</b> 67:15 98:4 169:3 <b>clarify</b> 66:24 71:17 96:22 107:8 108:16 120:4 127:13 130:21 147:22 148:18 152:13 160:10 166:21 176:24 178:14,17 179:3 <b>clarity</b> 50:10 93:24 96:10 120:1 147:5 167:21 <b>clean</b> 19:21,22 23:7 29:7 <b>clear</b> 65:19 66:2 67:11,17 73:17 95:1 120:10 122:18 143:17 168:13,19, 24 177:8 <b>cleared</b> 19:12 22:7,13 23:6 49:25 <b>clearly</b> 65:15 <b>click</b> 63:20,21,2	2 <b>cliff</b> 79:9 <b>cliff's</b> 81:18 <b>close</b> 85:18 117:14 181:21 <b>closely</b> 70:3 <b>closer</b> 26:14 58:3 <b>closing</b> 132:25 139:19 179:24 <b>co</b> 82:23 <b>coffee</b> 7:6 77:6 161:24 <b>coliform</b> 106:16,22 107:5,10,2 1 110:17 <b>coliforms</b> 108:2 <b>collaboration</b> 5:17 164:14 166:10 167:15 <b>collaborations</b> 163:25 <b>collaborative</b> 167:11 <b>collected</b> 4:7 46:8 137:5 <b>collecting</b> 98:13 99:7 154:10 <b>com</b> 51:19 162:20 <b>comb</b> 89:7 <b>combined</b> 14:25 136:15 <b>comes</b> 26:5	28:15 38:1 116:12 157:15 170:11 172:9,16 <b>comfortable</b> 68:4 98:14 113:22 133:7,13 180:3 <b>coming</b> 6:5 7:6 8:7 15:14 45:14 76:15 83:15 84:8 93:18 140:20 141:4 153:6 161:4 171:20 <b>commence</b> 32:23 <b>commencement</b> 30:4 <b>commencing</b> 6:1 <b>comment</b> 8:23 64:7 67:24 86:6,12 87:6,19 97:5 114:11 157:14 158:18 162:16 163:18 179:24 <b>commenting</b> 126:24 <b>comments</b> 7:11 8:3,21 27:11 62:3 63:5,20 65:10 66:9,15 67:21 86:7 87:11 99:22	105:17 142:10,15 145:14 162:3,23 163:2,8 169:6 175:21 180:7 <b>commitment</b> 35:12 101:7 <b>commitments</b> 66:3 87:16 130:4 <b>communicate</b> 133:16 <b>communicated</b> 8:9 <b>communication</b> 131:20 <b>communications</b> 131:5 <b>compact</b> 28:8 <b>compaction</b> 28:9 119:17 <b>company</b> 72:17 <b>compare</b> 44:17 <b>compared</b> 37:2 <b>compares</b> 88:14 <b>complete</b> 8:2 18:1,3,13, 14,15 24:5 49:25 51:19 52:23 101:4 104:6 119:11 123:20 130:6 144:15 <b>completed</b> 32:7 47:14,16	51:21,24 52:13 76:20 84:13 87:23 95:8 118:23 119:6 123:21 <b>completely</b> 21:1 <b>completing</b> 52:24 90:1 117:12 125:21 174:2 <b>completion</b> 29:1 30:3 116:12 150:13 151:3,18 152:3,5 160:2 <b>compliance</b> 37:7 38:20 50:7 53:20,25 54:5 78:25 91:20 92:18 93:23 94:2,6,13 95:15 138:20 145:9 148:13 151:6 154:2 <b>compliant</b> 37:17 <b>complicated</b> 130:14 <b>component</b> 63:8 123:16 125:13 127:19 <b>components</b> 16:21 117:2 127:7 129:18
---	---	---	--	---

131:17	114:21	<b>conservative</b>	19:6,11,12	57:12,13
168:20	116:11	59:14 70:7	,18 22:25	72:19
178:5	123:3,16,1	73:7	26:20 59:1	79:23
<b>comprehensiv</b>	7 124:21	94:18,19	60:9 74:23	83:22
<b>e</b> 11:19	125:4	<b>consider</b>	<b>construction</b>	102:6
149:4	141:2	28:21 51:7	16:9 29:13	<b>Contaminants</b>
<b>con</b> 85:8	155:14	113:18	33:4 56:21	15:4
118:21	177:12	143:12	57:21 60:7	<b>contaminated</b>
181:14	<b>conditions</b>	172:7	61:4 74:20	16:2 19:24
<b>concentrated</b>	52:17	<b>consideratio</b>	104:19,20,	20:10 22:1
122:10	56:17	<b>n</b> 45:1	23 105:2	27:23
<b>concentratio</b>	58:19	50:7 76:2	119:5,7,19	40:22
<b>n</b> 84:22	69:17	84:18	121:19	<b>contaminatio</b>
85:13	70:9,15	115:12	124:10,23	<b>n</b> 162:2,8
<b>concentratio</b>	71:15	145:4	125:22	163:3
<b>ns</b> 79:15	80:18,22	158:5	127:14	<b>cont'd</b> 5:1
82:1	83:7 86:20	<b>considered</b>	150:13	<b>content</b>
106:20	95:4 116:9	15:24	151:3	11:24
107:22	119:16	16:24 41:2	152:4	<b>CONTENTS</b> 3:1
<b>conceptual</b>	131:23	114:7	155:6	<b>context</b>
22:20	146:16	<b>considering</b>	171:25	147:2
123:10	148:3	28:16 34:1	172:10,12,	148:12
125:6,10	152:24	76:18	21	151:2
149:8	153:7	120:17	<b>consultant</b>	<b>contingencie</b>
150:7	177:22	140:6	98:20	<b>s</b> 74:11,16
153:3	<b>conduct</b>	<b>consistency</b>	<b>consultants</b>	<b>contingency</b>
177:23	24:23	57:5	44:12,20	5:10 97:24
<b>concern</b> 15:5	<b>conducted</b>	<b>consistent</b>	95:18 98:6	106:15
109:7	36:17	70:22	146:19	107:4
126:22	<b>conference</b>	<b>consistently</b>	148:2	110:13,19
<b>concerned</b>	8:11 9:18	70:18	150:14	139:10
41:9	179:11	89:20 90:6	176:7	<b>continuation</b>
<b>concerns</b> 9:3	181:15	<b>consolidate</b>	177:21	12:16 13:3
31:14,15,1	<b>confirm</b>	16:8	<b>consultation</b>	<b>continue</b>
9,24	66:23	<b>consolidated</b>	41:8 92:19	12:25
48:14,15,1	92:23	17:24	<b>consulting</b>	24:14 28:5
6 88:22	<b>confirmed</b>	18:5,9	72:17	31:11 33:3
127:17	15:22	22:18	<b>contact</b> 19:8	35:14
162:24	30:25	49:13	<b>contain</b>	78:24,25
180:11	<b>confirms</b>	<b>consolidatio</b>	27:21	98:23
<b>condensed</b>	92:15	<b>n</b> 26:8	<b>contained</b>	133:17,23
82:12	<b>confused</b>	122:6	19:25 29:4	141:24
<b>condition</b>	152:10,11,	<b>constraints</b>	122:3	171:5
33:4	12	160:18	<b>containment</b>	<b>continued</b>
35:2,19	<b>confusion</b>	<b>construct</b>	15:1,18	20:16
36:4,16,20	66:6	27:20	16:9,10	<b>continuing</b>
37:12	<b>connect</b>	74:20	18:1,7,11	33:25 34:7
43:19	56:23	<b>constructed</b>	20:20,25	131:13
101:2	<b>connection</b>	18:8	21:16	<b>contract</b>
113:18	49:17		30:10	
			49:14 50:1	

23:16,22	<b>co-per</b> 80:12	123:4	27:25	100:18
85:9 105:4	<b>copied</b> 78:6	126:1	28:3,20	120:25
<b>contracted</b>	<b>copies</b> 7:10	<b>covered</b>	29:9 59:20	124:21
35:23	<b>co-</b>	22:24	70:6 79:24	136:17
42:19	<b>precipitat</b>	35:15	83:25	148:11
159:19	<b>ion</b> 78:18	40:19 42:3	<b>cubic</b>	171:4
<b>contracting</b>	80:12	114:17	15:6,12,21	178:11
49:24 53:2	<b>core</b>	149:21	17:15,25	<b>cut</b> 39:2
105:7	55:13,14	<b>craft</b> 157:13	19:24	<b>cutting</b>
123:24	58:14	<b>crafting</b>	25:11	116:2
<b>contractor</b>	<b>correct</b>	45:19	28:16 34:1	
19:10	26:10	<b>create</b>	59:12	<hr/>
23:17,25	38:14	102:11	62:8,10,18	D
24:2 25:8	51:10	<b>creates</b>	67:25	<b>D-34</b> 43:19
52:22	108:22	125:23	79:13	<b>daily</b> 66:8
53:10 61:2	120:12,21	<b>Creek</b> 129:25	112:16	<b>dam</b> 17:11
81:9 84:16	136:20	<b>criteria</b>	<b>cuff</b> 126:16	22:10,12,1
85:10,22	169:20	4:12,18	<b>cumulative</b>	5,16
86:21	170:5,7	5:8 20:6	68:1	26:2,3,4,6
118:15,21	182:5	38:20	<b>curious</b> 52:8	,11,12
120:3,7	<b>counterparts</b>	44:15,16,1	70:8	29:12 51:8
<b>contractors</b>	164:24	8,25 45:13	<b>current</b> 4:4	55:12,13,1
56:16	<b>couple</b> 12:21	46:16 79:2	12:22	4,15,22
84:14	40:16 59:3	89:11	17:13 28:2	56:8,17,20
<b>contracts</b>	65:18	90:3,6	33:22	57:18,21
85:14	67:12	91:3 94:12	34:25 35:1	58:2,5,7,1
<b>contribution</b>	68:5,6,21	95:10	46:3	2
<b>s</b> 49:9	70:4 86:18	97:21	47:1,8	60:14,16,2
<b>control</b>	102:9	98:15	59:5 80:22	0 61:19
133:22	129:7,18	110:7,9	88:15	70:19,20
143:9	132:11	114:13,20,	94:5,20	71:3,7,8
170:14,20	146:11	22 120:24	96:1	79:25
<b>controlled</b>	162:2,6	127:7	100:18	119:13
61:6	164:21	137:9,22	101:22	149:20
<b>conundrum</b>	169:13	138:4	106:14	<b>dams</b> 15:18
95:7	<b>Courageous</b>	139:9	115:9	28:19
<b>convenient</b>	56:3,5	158:3	116:18,20	51:13
94:23	129:21	162:18	117:11	83:19 84:1
<b>conversation</b>	<b>course</b> 42:6	<b>cross-</b>	122:24	138:9
86:13 96:8	44:3	<b>referencin</b>	137:3	<b>data</b> 4:5,9
97:8 161:2	153:21	<b>g</b> 8:24	139:1	46:4,11
<b>conversation</b>	181:4	<b>Crown</b> 14:19	159:8	47:19,21
<b>s</b> 43:2	<b>court</b> 138:15	94:4	174:3	80:10
48:14,23	<b>cover</b> 18:13	<b>crushed</b>	176:6	82:23
130:22	21:18 29:4	25:25	<b>currently</b>	89:10,12,1
163:25	50:25	<b>crystal</b>	8:19 22:21	6 90:14,17
165:16	74:21	120:10	23:12,19	94:9 96:1
<b>convey</b> 26:18	102:5,8	<b>cub</b> 15:21	49:24	98:12,15,1
	120:16	<b>cubes</b> 21:5	51:15	7,21 99:7
	121:24		52:10	107:19
			71:22	112:20
			84:22	137:3,6



151:10	126:5	147:4,18	4:2 5:2	158:11
<b>date</b> 11:15	<b>decide</b>	148:13	130:5	<b>developed</b>
47:2	124:17	149:6	<b>design</b> 23:23	41:7,8
127:12	<b>decided</b>	150:6	50:5 72:16	44:25
136:22	41:11	153:17	73:7 74:23	45:13
151:17,21	<b>decides</b>	165:10	75:1 94:1	107:15
159:17	115:2	<b>definitively</b>	102:4,9,16	148:1,10
176:8	<b>decision</b>	143:5	104:20,21,	177:20
179:3	110:6	<b>delay</b> 11:2	23	<b>developing</b>
181:7,17	128:12,13	<b>delayed</b> 97:2	118:3,9,21	152:16
<b>dates</b> 8:7	180:20	<b>delegated</b>	,25	158:5
95:23	<b>decisions</b>	167:11	119:2,22	<b>development</b>
96:13 98:5	99:3	<b>deliverable</b>	120:6,16,2	25:15
177:24	146:12	98:7	0,24	133:2
<b>day</b> 16:22	150:23	116:24	121:24	155:6
27:25 28:3	153:23	146:24	122:12,25	<b>dever</b> 147:25
29:9	155:11	<b>deliverables</b>	124:5	<b>devolution</b>
45:20,23	<b>decommission</b>	147:25	125:10	164:21
48:6 54:8	<b>ing</b>	150:24	127:7	<b>dewatering</b>
96:25	4:15,21	177:20	<b>designated</b>	61:6 70:1
128:14	90:24 91:9	<b>delve</b> 33:1	6:24	<b>DFO</b> 2:15
134:6	137:20,25	<b>demob</b> 24:5,8	<b>designed</b>	64:19
137:18	<b>dedicated</b>	<b>demobilizati</b>	73:15	71:12
177:18	12:6	<b>on</b> 24:6	<b>designs</b>	77:16
178:9	<b>deemed</b> 8:2	27:7	103:12	132:14
181:21	<b>deeper</b> 96:9	<b>department's</b>	120:3	180:7
<b>days</b> 101:17	<b>defer</b> 40:9	42:12	<b>despite</b>	<b>difference</b>
124:22	46:22	<b>depend</b> 93:2	70:15	25:13
125:3	64:19	94:8	<b>destroyed</b>	69:23
126:6	168:8	<b>dependencies</b>	173:4,6	<b>differences</b>
151:19	<b>deferred</b>	119:20	<b>detail</b> 40:1	157:9
160:17	101:22	<b>dependent</b>	54:9 73:13	<b>different</b>
181:6	<b>define</b>	117:14	<b>details</b>	28:11
<b>de</b> 106:23	138:16	119:8	38:24	34:20
<b>deadline</b>	177:24	<b>depending</b>	44:24 83:2	35:19 44:1
97:2	<b>defined</b>	180:18	131:1	56:5 57:3
<b>deal</b> 13:15	145:17	<b>deposited</b>	<b>detection</b>	58:11
16:20 21:7	<b>defining</b>	14:8	33:24	61:17
39:2 78:12	138:13	<b>derived</b> 78:7	<b>deter</b> 37:5	68:15 78:9
101:15	<b>definitely</b>	<b>des</b> 120:3	<b>determine</b>	81:3 84:13
<b>dealing</b>	80:5 96:14	<b>describe</b>	38:12	117:3
37:10	97:4	141:17	94:10	120:24
42:11 80:3	112:16	<b>described</b>	140:25	131:9
86:23 87:2	113:9	122:13	<b>determined</b>	153:4
106:14	130:13	169:23	37:5 42:5	168:20
<b>dealt</b> 13:8	131:10	<b>description</b>	92:19	<b>differing</b>
16:16,17	137:16		<b>develop</b>	147:17
21:6,23	146:23		38:16	<b>differs</b>
<b>December</b>				104:12
12:24				
35:25				

<b>difficult</b> 28:6 84:9	2 107:3,16,2 3,25	148:12 168:7	<b>document</b> 43:4,7 88:20	88:19,22 92:13 137:4
<b>DIFFICULTIES</b> 11:5	108:1,17,2 3,24	<b>discussions</b> 5:16 48:8,15	131:19 155:9 156:11	<b>draft</b> 33:19 94:16 133:18
<b>dig</b> 96:8	109:6,23 110:7,9,21	115:15 131:14	173:20	145:20 149:2,10
<b>diligence</b> 151:6	111:25 112:4,18	144:5 148:8	<b>documentatio</b> <b>n</b> 128:1	157:5,14 161:8,9
<b>diligently</b> 176:3	113:16 114:18	149:10 164:13	<b>documents</b> 124:2	169:18
<b>direct</b> 27:24 29:8 59:7 98:6	115:6,7 137:9 138:5,6 139:5,8,9	166:8 <b>dismantled</b> 51:8	125:16 147:2 152:16	<b>drafted</b> 124:12 145:6 154:8 167:22
<b>direction</b> 29:24 180:8	<b>discharged</b> 17:4,14,17 37:21	<b>disposal</b> 106:10 108:18,19	<b>dog</b> 120:15 <b>done</b> 11:15 15:5 17:12	<b>drafting</b> 93:7,18 116:9 117:7 145:3,13 161:2 164:2 171:2 177:12
<b>directly</b> 156:11 164:25 165:3,5 168:9	78:23 107:2 113:19 114:14	<b>disposed</b> 20:1	20:7,11 21:11,17 23:22 35:3,10,22 ,24 44:18 45:15	<b>drain</b> 61:8 115:8
<b>director</b> 6:9	<b>discharging</b> 79:15	<b>disposing</b> 110:11	53:16,18 58:20 60:8 65:9,21 71:25 79:23 83:11	<b>drainage</b> 29:19,20,2 5 55:21 56:18,21,2 4 59:1 60:12 61:3,8,12 72:3,15 73:20 76:3 98:19 102:17
<b>dirtier</b> 86:24	<b>Discovery</b> 130:17	<b>distance</b> 73:20 75:4 94:22 107:24 113:5	83:11 103:25 118:4 128:8 144:22 158:20	<b>drains</b> 29:23
<b>dirtiest</b> 85:20	<b>discrepancie</b> <b>s</b> 130:23 169:17	<b>distinct</b> 19:14	<b>door</b> 6:22 7:2,3	<b>draw</b> 58:18 59:16,25 119:22
<b>dirty</b> 19:22	<b>discrepancy</b> 114:23	<b>distribute</b> 102:15 122:10	<b>dotted</b> 58:13 <b>double-check</b> 172:15	<b>drawdown</b> 3:7 26:5 54:17 55:8 63:7 65:12,24
<b>disadvantage</b> 172:2	<b>discuss</b> 25:1 89:16,18 96:23	<b>distribution</b> 176:25	<b>double-checking</b> 175:20 <b>downstream</b> 4:5 36:25 38:18,19 41:17,21,2 3 44:14 46:5 62:5 63:1 81:20 85:7 87:17,20	
<b>disbursing</b> 121:11	<b>discussed</b> 40:1 65:25 95:17 114:2 147:1 165:17 167:12	<b>distributive</b> 102:19 122:9		
<b>discharge</b> 4:12 5:3,8 46:16 58:21 62:1,7,12 66:4,8 71:25 72:20,24 74:13 76:11,14 78:13,14,1 6 79:1,3,6,1 2 80:6,20 81:5,7,21 84:23 85:6 86:25 87:20 97:13,20,2	<b>discussing</b> 62:4 88:2 157:18 176:5 <b>discussion</b> 90:20 93:23 96:5 129:9 138:5 140:12	<b>div</b> 177:19 <b>diversion</b> 72:25 74:6 <b>diverted</b> 23:5 <b>Division</b> 10:13 136:2 <b>divulge</b> 105:5		

67:5 71:25	121:13	151:8	110:6	128:5
<b>drawdown's</b>	<b>during</b> 16:18	160:15	114:13	131:4
55:11	20:12	<b>earth</b> 18:13	137:22	<b>encouraging</b>
<b>drawing</b>	30:24	21:18	138:4	130:19
22:21	31:10,15	102:5,8	<b>eight</b> 98:18	<b>end-of-</b>
58:24	32:7	<b>earthworks</b>	133:4	<b>project</b>
<b>drawings</b>	33:2,7,10	31:20	<b>eighteen</b>	52:17
105:1,2,5,	34:9,16,23	<b>easier</b>	47:15	<b>engage</b>
12	42:15 45:8	126:10,17	103:18,21	130:19
118:3,21,2	47:23	<b>easily</b> 65:4	104:3	<b>engineer</b>
5 119:2,23	52:11	174:10	<b>either</b> 13:9	105:1,2
122:15,23	57:21 60:6	<b>East</b> 17:11	89:6	122:22
123:5	62:23 76:7	22:10,14,1	132:10	123:5
124:6,9,10	86:19	6	168:2	<b>engineered</b>
125:15,22	87:11	26:3,4,5,1	<b>element</b>	16:10
126:7,13	103:14	1,12 51:8	157:14	58:22
<b>drawn-down</b>	104:8	55:12,15,2	<b>elevated</b>	122:15
133:9	108:23	2 56:7	158:2	143:10
<b>dried</b> 173:10	121:7	57:18	<b>elevation</b>	<b>enormous</b>
<b>drier</b> 70:15	125:22	60:14	59:23 70:7	58:7
<b>drill</b> 49:3	135:7	61:19	99:10,11	<b>ENR</b> 10:13
<b>drink</b> 77:5	139:19	70:19	<b>elevations</b>	40:16
<b>drop</b> 56:11	141:20	119:13	69:24 70:3	41:25 44:5
<b>drought</b>	142:10	<b>eat</b> 77:6	125:11	64:8
69:17	144:18	<b>echo</b> 104:23	<b>else</b> 9:5	67:21,24
<b>dry</b> 21:13	147:12,16	121:6	20:10 52:5	69:13
56:17	149:1,21	177:4	100:5	70:25 72:5
57:16	156:10	<b>ecological</b>	101:23	86:8,9,11
58:19 60:4	157:19	4:8 35:21	105:21	87:5 106:2
70:9 80:3	162:8	36:17,23	121:1	111:17
84:3,5	173:6	46:10	142:3	113:2
<b>dual</b> 165:8	180:2	137:6	152:12	136:2
<b>due</b>	<b>dust</b> 28:7	<b>EF</b> 103:4	163:10	162:3,4,6,
8:4,10,14,	169:23	<b>effect</b> 80:22	177:2	21 168:11
15,17,18	170:10,14,	180:10	181:20	176:19
47:8 80:17	20	<b>effective</b>	<b>email</b> 137:15	179:23
82:8	<hr/>	107:14,21	68:13	180:6,23
96:14,16	<b>E</b>	<b>effects</b>	<b>emailed</b>	<b>ENR's</b> 180:1
136:17	<b>E/F</b> 18:22	48:21 79:5	68:13	<b>ensure</b> 4:20
151:6	74:8	80:8	<b>emergency</b>	48:12 50:5
176:17	<b>eager</b> 128:10	<b>effluent</b>	6:21	91:6 94:2
179:3,6,7,	<b>earlier</b>	4:17 45:12	<b>employed</b>	130:9
8	20:24 49:3	53:20 78:1	78:19	137:23
<b>dumping</b>	80:19	79:1,5	<b>enclosed</b>	139:17
110:13	104:1	80:20 81:5	50:22	<b>ensuring</b>
<b>duplication</b>	114:2	82:2 87:18	<b>encounter</b>	66:17
154:14	121:7	89:11 91:2	83:6	120:23
<b>durable</b>	141:15	95:10	155:25	143:7
	155:25	98:15	<b>encourage</b>	<b>enter</b> 13:1
	178:12			24:11 30:6
	<b>early</b> 55:24			
	141:8			

32:17	53:2,11	<b>establish</b>	<b>everything</b>	<b>excessive</b>
<b>entering</b>	<b>equitable</b>	38:19	18:23	75:22
116:15	105:6	53:25	36:25	<b>exfiltration</b>
144:15	123:23	141:1	88:22	175:7
<b>entire</b> 17:5	<b>erosion</b>	<b>established</b>	101:23	<b>exist</b> 7:19
84:2	25:21	49:19	122:5	<b>existing</b>
<b>environment</b>	72:18	51:9,13	139:2	4:14 43:20
4:21	73:16	116:17	177:5	46:18
34:15,21	133:22	144:6	<b>everything's</b>	51:13 76:5
36:6 38:18	143:9	<b>establishing</b>	66:20	95:16
41:17	<b>erosional</b>	44:18	<b>evidence</b>	123:2
46:25	92:9	<b>estimate</b>	4:10,19	137:10
47:11,24	<b>erosion-</b>	111:23	46:13 91:5	138:24
48:1 51:4	<b>resistant</b>	<b>evaluate</b>	124:19	145:8
91:8	74:8	90:17	137:7,23	<b>exits</b> 6:22
100:23	<b>escape</b> 6:7	115:6	<b>exact</b> 32:1	<b>expand</b> 19:3
101:1,7,8	<b>esker</b> 25:20	128:6	61:14	<b>expansion</b>
103:17	<b>especially</b>	<b>evaluated</b>	137:15	19:1
104:2,5	70:18	44:13	<b>exactly</b>	32:2
106:19	155:25	<b>evaluation</b>	81:16	33:21
121:11,15,	<b>essence</b>	133:12	94:12	52:16
20 137:24	167:7	<b>evaluations</b>	108:19	80:13 82:9
141:16	<b>essentially</b>	65:9	109:13,17	119:6
152:17	12:20	<b>event</b> 31:6	126:23	120:3
155:7,10,1	15:1,24	74:14,15,2	141:7	<b>expected</b>
3 157:22	19:8,21	1 121:12	168:17	30:18 32:1
159:9	22:5	151:18	<b>excavate</b>	34:10
171:25	24:12,17	<b>events</b> 13:15	56:17 61:2	75:25
<b>environmenta</b>	27:14,18	121:13	71:3	80:13
<b>l</b>	29:10	144:8	<b>excavated</b>	120:11
141:17,23	30:1,8,14	<b>eventually</b>	25:17	143:11
151:6	31:6 32:14	56:23	56:20	144:20
<b>envision</b>	35:4 47:12	76:16	<b>excavation</b>	<b>expecting</b>
157:5	59:15	<b>everybody</b>	60:7	36:24
158:22	60:15	6:3,12	149:21	50:25
<b>EQC</b> 90:14	61:20	10:25	172:13	101:3
95:4	79:10 81:8	11:7,8,22	173:6	118:11
113:8,14	83:21	13:11	<b>excavations</b>	134:22
138:18,20	85:16	75:16	172:14	<b>experience</b>
<b>EQCs</b> 87:6	101:14	132:2	<b>excavation's</b>	76:4
121:2	118:7	135:4	58:20	<b>experienced</b>
145:9	125:20	164:1	<b>exceed</b> 62:18	85:22
<b>equal</b> 104:16	129:25	167:15,21	83:22	89:23
<b>equalling</b>	143:8	179:14	<b>exceedances</b>	<b>expert</b> 42:12
61:14	144:12	181:23	37:15 38:9	<b>experts</b>
<b>equals</b> 59:19	147:15	<b>everybody's</b>	<b>exceedences</b>	80:14
<b>equipment</b>	149:17	73:18	82:17	<b>expire</b> 25:1
20:12	155:24	<b>everyone</b>	84:25	<b>expiring</b>
27:3,8	159:4	134:21	92:8,11	
31:18,23	160:13,16			



<b>fish</b> 35:4	61:1 72:12	145:1	181:23	34:6
<b>Fisheries</b>	73:9,25	158:18	<b>forwarded</b>	<b>full-time</b>
9:17	74:5,13	171:18	132:14	30:23
40:8,13	75:3	<b>footprint</b>	137:14	<b>functioning</b>
64:8,10,22	102:12,15,	21:16	<b>frame</b> 37:10	27:4
99:23,25	16 107:17	103:8	145:13	<b>future</b> 6:20
106:4	121:3,11	122:1	151:18,22	13:17 19:1
132:7,23	122:10	<b>force</b> 148:24	<b>framework</b>	38:8,9
134:4	144:6	<b>forget</b> 6:17	156:23	39:24
<b>fits</b> 124:24	<b>flowing</b>	35:1 47:2	159:14	53:4,25
<b>five</b> 24:12	53:22	<b>form</b> 102:5	<b>free</b> 29:17	54:5 85:3
26:14	102:21	121:10	53:22	162:15
32:2,19	<b>flown</b> 55:25	134:5	144:6	
33:12	<b>flows</b> 23:4	164:5	164:10	G
48:10,17	37:25 56:3	<b>formal</b> 98:24	<b>freeze</b>	<b>gaps</b> 65:7
59:22 60:4	102:22	180:5,10	109:10	<b>gate</b> 126:21
79:18 82:7	103:1	<b>formalize</b>	<b>freque</b> 73:2	<b>gathered</b>
83:13	<b>fluid</b> 109:11	97:1,10	<b>frequencies</b>	21:10
84:20	<b>flying</b> 57:4	<b>formalized</b>	4:23 5:6	<b>gathering</b>
85:1,6	<b>focus</b> 25:18	99:1	91:11	94:9
86:15	78:1	<b>formally</b>	97:18	<b>gauging</b>
93:10	126:23	122:19	138:1	116:14
102:20	<b>focussed</b>	156:9	139:7	<b>gears</b> 116:6
129:11	52:16 74:5	<b>format</b> 78:8	<b>frequency</b>	<b>general</b> 12:5
132:18	102:16	<b>former</b> 16:25	156:2	40:4 52:5
138:11	<b>folder</b> 69:4	57:9	172:25	56:7 110:5
140:14	<b>folks</b> 9:13	75:18,19	<b>freshet</b>	112:2
<b>fix</b> 144:21	39:23 40:6	<b>formerly</b>	17:22	153:3
<b>flat</b> 57:14	54:11 64:8	15:2	21:7,8	163:4,9
73:24 75:1	88:2	<b>forms</b> 102:11	25:10	169:6
102:10	124:25	<b>forty</b> 56:12	30:16,24	<b>generally</b>
<b>flex</b> 84:19	129:10	<b>forty-two</b>	70:18	95:2
<b>flexibility</b>	130:19	59:22 60:4	83:22 92:8	<b>generated</b>
117:18	132:17	<b>forward</b> 7:24	<b>fringe</b>	146:13,18
<b>flight</b> 13:22	161:17	11:17,19	61:20,21	<b>generating</b>
31:8	164:6	76:23	<b>front</b> 7:11	15:20,25
<b>flip</b> 140:5	176:16	96:23	112:8	<b>generation</b>
<b>floor</b> 9:12	181:13	127:18	158:13	48:21
11:9 64:10	<b>followup</b>	130:21	<b>frozen</b>	<b>geochemical</b>
77:19 86:9	91:16 93:5	131:4,7	111:22	48:15
87:9 100:8	112:10	133:14,20	<b>full</b> 16:23	49:25
116:3	<b>follow-up</b>	150:17	30:17	<b>geochemistry</b>
136:10	34:24	161:11	51:14	49:23 50:3
139:24	44:20,23	162:14	53:11	51:24
142:13,19	64:11	162:14	79:24	76:19
162:4	67:21	164:20	82:23	89:25
163:11	111:15	165:24	127:6	153:22
<b>flow</b>	112:16	174:6	<b>full-scale</b>	
29:7,17,23	120:9	179:19		
51:8 56:22	121:22			

158:10	163:23	95:12,13	25:19	132:14
<b>Georgina</b>	164:6,11,2	98:2,16	<b>great</b> 12:8	133:4
2:15	2,24	107:7	33:13,14	143:4
9:16,17	165:15,17	108:21	53:6 55:3	145:19
40:7,8	166:4	111:3	67:19 87:8	150:20,25
64:14,17,1	168:14	112:9	100:4	156:5
8,19	178:3	113:25	102:11	162:8
132:10,15	180:17	115:3	103:9,10	164:18
<b>geotechnical</b>	<b>GNWT-ENR</b> 2:9	116:16	110:16	171:1
34:8 35:14	<b>GNWT's</b> 167:3	117:9	129:12	174:1,5
48:13	180:15	118:5,24	131:25	180:18
<b>geotechnical</b>	<b>goal</b> 29:19	121:4,5	134:9	<b>guide</b> 50:4
<b>ly</b> 24:18	<b>gold</b> 13:25	124:4	154:10,16	<b>guideline</b>
30:14	129:21	125:5	174:14	92:12
140:19	<b>Golder</b>	127:13	<b>greater</b>	<b>guidelines</b>
143:8,13	62:20,21	128:20	17:18	92:5
<b>geotextile</b>	<b>gone</b> 21:21	129:15	93:24	<b>guys</b> 39:4,16
74:7	29:10,15	131:11	<b>ground</b>	113:11
<b>gets</b> 99:11	31:22	136:5	119:16	117:8
168:19	50:14	137:13	171:22	137:11
<b>getting</b> 5:24	65:20 89:5	138:3,22	<b>groundwater</b>	146:10
23:13	102:9	145:22	171:23	175:1
24:20	173:8	146:22,23	172:8	176:1
54:23	<b>Goodbye</b>	148:5	173:2,17	177:6
70:13	134:13	149:7	175:3,11,1	180:24
96:20	<b>gotten</b>	150:10,11	3	
124:25	101:18	151:1	<b>group</b> 48:9	<hr/> H <hr/>
150:25	<b>governance</b>	152:1	105:9	<b>half</b> 56:10
153:9	98:25	153:15	169:7	59:14 70:6
173:12	<b>government</b>	155:20	<b>groups</b> 41:10	103:9
174:5,20	14:19	157:16,17	<b>guarantee</b>	108:24
176:6	105:6	159:23	84:15	109:19
<b>gigantic</b>	123:24	160:12	<b>guaranteed</b>	<b>Hambone</b>
57:17	<b>Gowman</b> 2:12	164:17	41:19	17:17
60:19,24	10:16	167:23	<b>guess</b> 33:7	29:18,21
<b>given</b> 89:21	11:12	170:17	42:8 57:4	37:5,9,21,
91:24	12:10 43:9	175:23	68:20	24,25 38:5
95:12,14	44:19,22	<b>grab</b> 84:24	69:15,21,2	40:21 41:1
107:22	48:24	<b>grade</b> 73:23	2 74:14	49:18
108:25	50:19	75:1,4,11,	85:25	53:22
120:14	51:10,20	14	86:24	55:21
127:15	52:15	<b>graded</b> 18:21	93:17 94:8	56:23 59:7
<b>gives</b> 90:4	70:12	<b>gradient</b>	98:12	60:6
93:25	71:19,20	112:22	101:25	62:1,8,18
154:13	72:14	<b>grading</b>	109:3	72:13,25
<b>giving</b>	74:3,14	119:11	110:11	73:21
175:25	76:1,17	<b>grand</b> 110:22	112:6,11	76:14,16
<b>glad</b> 136:19	89:15,17	<b>granular</b>	113:20	78:14,24
165:20	90:19	25:19	118:1,22	80:7,16,17
<b>GNWT</b> 5:14	93:21	49:2,7	120:22	, 22,25
		<b>gravelly</b>	123:8	81:20
				91:21 92:3

112:23	181:18	84:6	106:8	<b>honesty</b>
114:2	<b>hazards</b>	<b>heavy</b> 60:25	117:22	83:11
144:7	16:17	<b>HELD</b> 1:17	150:18	<b>hope</b> 7:20,21
<b>hammer</b> 97:8	<b>head</b> 88:11	<b>help</b> 34:21	155:3	8:8,12
<b>hand</b> 142:4	<b>heads-up</b>	36:2 50:4	<b>high</b> 92:9	<b>hoped-for</b>
148:24	165:11	54:1 135:3	109:9	123:11
<b>handle</b> 72:12	<b>health</b> 4:8	141:18	<b>higher</b> 71:6	<b>hopefully</b>
73:8,15	35:21	146:13	<b>high-flow</b>	18:18
74:13	36:16,23	148:2,3	75:5	38:15
<b>handled</b>	38:18	150:21,22	76:4,7	49:22
131:19	43:22 46:9	177:21,24	<b>highlighted</b>	50:10
<b>hanging</b> 7:2	137:6	<b>helpful</b>	63:24	54:25
<b>happen</b> 33:10	<b>hear</b> 134:2	50:13	<b>highly</b> 31:11	137:17
53:16	172:4	90:11	33:15	162:14
94:21	<b>hearing</b>	96:8,22	35:17	<b>hoping</b>
128:15	7:20,25	124:14	41:15	118:13
143:2	8:16,18,19	145:18	59:16 92:9	<b>hosting</b>
144:9,13	179:7,8	152:22	102:22	41:21
170:12	180:13	154:6,16	<b>hire</b> 23:16	<b>hour</b> 13:22
<b>happened</b>	181:6,10,1	161:1,5	<b>historic</b>	62:8,11,18
12:20	9	181:4,15	15:1 20:9	67:25
13:16 48:8	<b>Heather</b> 2:6	<b>helps</b> 179:18	22:2 29:20	<b>huge</b> 58:7
81:17	10:5 44:9	<b>here's</b> 13:20	37:6 56:24	<b>human</b> 4:7
133:3,8	45:4 46:21	14:20	<b>historical</b>	35:21
162:8	48:2	81:18	4:4 46:3	36:16,23
<b>happens</b>	51:5,17	<b>he's</b> 53:8	49:12	38:18 46:9
180:19	52:6,7	<b>HHERA</b>	51:12	137:5
<b>happy</b> 85:3	87:12 89:2	36:16,18	89:16	<b>hundred</b>
<b>hard</b> 147:10	92:22	37:5	98:21	25:12
151:17	94:25 98:9	38:12,13	112:20	62:24
179:15	99:4 106:8	42:22	114:4	68:2,3
<b>haven't</b> 20:7	107:8	43:10,22	137:3	73:4 74:12
22:18	108:15	44:11	<b>history</b>	79:18
50:13	110:1,2	45:14	13:24	171:19
63:14	111:3	52:9,14,15	55:24	<b>hydrocarbon</b>
88:20 89:5	113:6	,22 53:7	<b>hit</b> 59:19	16:1 162:2
101:18	114:9	54:1	<b>hits</b> 33:24	163:3
108:24	115:4,16	79:5,22	88:20	<b>hydrocarbons</b>
123:22	117:22	80:5,16	92:14	162:7
140:9	118:6,19,2	82:6 86:15	159:3	<b>hydrology</b>
148:9	0 120:2	87:22	<b>hold</b> 52:24	99:6,9
<b>having</b> 58:1	122:16	92:2,15	54:6 75:20	<hr/>
76:12	135:20	93:2 98:24	105:11	<hr/>
108:17	146:7	152:17	130:25	<b>I</b>
116:11,23	150:18	<b>HHJs</b> 92:20	<b>hollow</b> 24:19	<b>I'd</b> 25:16
122:9	155:3	<b>Hi</b>	<b>honest</b> 41:14	41:13
146:9	158:13	9:16,21,24	78:5 82:14	43:23
164:7	159:11,16	64:13,14	88:12 89:4	112:1
165:8	160:9	68:18		120:15
168:2	175:2	72:10		121:6
	<b>heaviest</b>	87:12		



164:18	106:9	<b>impact</b> 41:22	76:1 77:24	171:12
168:11	116:3	67:6	88:1,9	172:7
172:15	139:24	80:24,25	89:17	174:9
177:4	140:5	120:25	91:23	175:13,22,
179:13	142:4	121:19	93:22	24
<b>idea</b> 60:23	152:12	130:10	95:13	177:2,4,21
102:11	163:10	<b>impacted</b>	97:13	178:3,9
153:4	168:18	15:11	98:3,17	179:14
<b>ideal</b> 140:14	169:2	16:11	100:14	<b>INAC/CARD</b>
<b>ideally</b>	<b>I'm</b> 9:21,22	17:6,19	107:8	77:22
179:2	10:2,5,16	37:6,12	108:22	<b>INAC-CARD</b>
<b>identified</b>	12:4 13:16	38:6 57:25	109:14,15,	3:4,7,10,1
4:13	19:16 27:6	58:14	16 111:2,4	3,17 5:3
31:14,15,1	37:19	79:13 81:3	112:10	9:7,13
9 46:17	39:10	114:3	114:1	10:15,18
88:19	40:18	<b>impacts</b>	115:4,5	11:11 46:2
137:9	41:13 47:5	36:24	116:17	55:5 91:20
141:12	48:14,22	44:14 63:3	117:10	100:12
157:24	50:16 57:5	65:24	118:6	116:19
<b>identifies</b>	60:22 64:9	80:23	119:25	125:8
142:10	68:22	133:12	121:5,22	130:14
<b>identify</b>	69:14	141:11	122:22	140:2
53:15 54:1	70:8,13	<b>impairments</b>	123:15	<b>INAC-CARD's</b>
141:17	76:12	83:8	124:5,9	4:11 46:14
148:3	77:16	<b>impervious</b>	125:6,20	<b>INAC's</b> 63:20
<b>II</b> 13:13	87:19 88:2	18:12 29:4	126:10	165:2
15:4 16:20	96:12,18	<b>implementati</b>	129:14,16,	179:8
17:13	110:20	<b>on</b> 119:18	19 131:12	<b>include</b> 50:9
23:21	116:6	121:16	136:4,5	130:1
24:1,3,9	117:25	<b>implemented</b>	137:8,14	<b>included</b>
27:19 32:7	123:2,21	24:17	138:4	40:24
33:2,17	124:15,23	<b>implementing</b>	140:5	51:14
34:12	125:17	121:14	143:4	104:25
47:13	129:4	<b>important</b>	144:2	125:10
52:12,14	130:16,19	8:7 108:6	145:23	147:3
64:25	131:10	165:9	146:23	<b>includes</b>
103:19	132:8	<b>INAC</b> 1:8	147:10	62:9 118:9
<b>II-B</b> 74:18	136:10,16,	2:11 4:3	148:1,6	<b>including</b>
<b>I'll</b> 6:21	19 137:14	5:11,14	149:7,13	4:6,22
11:22	142:9	6:5 9:23	150:11	46:7 72:20
13:10 17:9	143:22	11:13,22	151:2	91:9 93:22
19:19	146:9,12	41:5 42:19	152:2	137:4,25
23:23 39:5	147:7	44:22	154:18	171:3
40:9 44:5	151:7	45:11	155:21	172:2
45:11 52:4	157:24	48:25	158:18	<b>inconvenienc</b>
59:9,10	165:15,17,	51:21 53:6	159:14,19,	<b>e</b> 54:25
60:16,21	20,22	55:7 65:21	24 160:13	<b>incorporate</b>
78:5 79:6	171:19	67:15 69:1	164:6,11,1	47:18
86:8 87:9	175:2	70:13	8,19,23	103:23
100:8	177:7	72:15	165:3,4,8,	<b>incorporated</b>
103:17	<b>image</b> 61:23	73:12 75:8	12	
	<b>imagine</b>		166:4,20	
	159:6		167:14,23,	
			24 168:8	
			170:7	

45:2 65:20 79:21 80:6 <b>incorporating</b> 156:2 <b>increase</b> 121:12 <b>increased</b> 28:13 73:3 <b>indicate</b> 140:21 <b>indicated</b> 82:25 92:2,7 114:3 <b>indicates</b> 81:16 94:6 107:19 140:18 170:15 <b>indication</b> 111:18 <b>individual</b> 12:1 <b>infancy</b> 14:12 <b>infiltration</b> 51:1,2 175:7 <b>influence</b> 121:1 <b>inform</b> 52:14 146:11,13, 15 148:2 150:23 177:21 <b>informal</b> 7:21 <b>information</b> 4:1,7 5:1 8:8,10 12:14 40:20 42:25 43:21 45:6,19,21 46:1,8 48:7 50:14 63:7,12 65:7,12	67:16 89:4 90:9,23 94:6 95:22,24 96:15,16,2 1 97:1,4,9,1 2 98:25 112:17 120:19 123:3,13 124:14,25 126:19 127:9,20 128:18 129:7,10 133:5,15 134:5 135:6 136:11,15 137:1,5,19 139:17 140:10 146:10,24 148:14,19 152:22 153:10,11, 18,19,24,2 5 154:9,11,1 3,18 156:20,25 157:12 161:7 166:3 167:8 168:11,18 174:13,17 176:25 177:9,11,2 3 178:2,8,12 ,17 179:1,4 180:3 181:4,16 <b>information's</b> 50:15 <b>informed</b> 95:8 157:21 <b>infrastructure</b> 16:15 21:20	22:3,5 53:3 57:10 130:2 <b>initial</b> 11:24 40:24 42:3 43:1 65:5 71:3 79:12 180:2 <b>initially</b> 72:21 <b>inlet</b> 94:7,11 <b>inlet/outlet</b> 92:23 <b>input</b> 79:21 80:5 99:2 130:8 133:6,18,2 3 176:7 <b>inputs</b> 17:22 21:8 25:10 37:9 79:22 80:7 <b>inquiring</b> 107:11 <b>ins</b> 113:7 <b>inside</b> 60:20 <b>inspect</b> 30:9 169:1 <b>inspection</b> 30:8 31:16 35:14 <b>inspections</b> 32:14 34:8 <b>inspector</b> 110:10 113:10,21 114:23 168:5 <b>inspectors</b> 5:20 164:3,15,2 3 166:15 167:1,14,1 8 168:3,15 178:7 <b>inspector's</b>	167:3 <b>install</b> 27:2 60:13 <b>installed</b> 57:15 <b>instance</b> 69:18,20 112:4 <b>instead</b> 110:13 120:18 122:9 151:16 168:9 <b>instrument</b> 167:19 <b>instruments</b> 168:25 178:6 <b>int</b> 101:1 <b>intended</b> 30:13 102:10 140:14 <b>intensities</b> 73:9 <b>intensity</b> 73:2,4,5 <b>intent</b> 122:19 <b>intentionally</b> 173:4 <b>interest</b> 93:22 95:15 130:1 <b>interested</b> 131:10 181:8 <b>interests</b> 129:19 <b>interim</b> 101:1,7 <b>interject</b> 68:11 <b>intermission</b> 157:19	<b>internal</b> 98:24 118:8 148:7 <b>internally</b> 115:13 120:23 <b>Intervenor</b> 8:16 179:7 <b>Intervenor's</b> 127:18 <b>intervention</b> 43:25 180:5,9 <b>interventions</b> 8:14,15 96:13 97:6 124:20 176:17 179:5,24 <b>introducing</b> 11:2 <b>introduction</b> 13:5 <b>introductions</b> 9:14 135:10 <b>invert</b> 60:11 <b>invertebrates</b> 35:4 <b>involved</b> 129:10 133:1 <b>IR</b> 111:18 139:5 168:20 176:7 180:16,18 <b>iron</b> 78:18 80:12 131:1 <b>IRs</b> 145:6,15,2 5 147:5 157:13 177:17 <b>isn't</b> 60:2 114:15,22
---	---	---	--	--

120:24	30:8,18	117:22	<b>Joel</b> 2:12	164:17
125:9	31:22,25	120:4	10:16	167:23
<b>issuance</b>	32:1,3,19	122:6,16,1	11:9,12	169:4
87:16 95:5	34:5,9	8 124:5	12:10	170:17,18
124:11,17,	35:3,8,22	126:10	43:8,9	175:23
18 126:7	36:21,22	130:13	44:19,21	177:4
131:8	37:4,9,11,	133:21	48:24	<b>Joel's</b>
<b>issue</b> 67:1	20,24	139:1,15	50:19	158:18
83:17 95:2	39:10,14	140:21	51:10,20	<b>joined</b>
105:1	41:19	141:2,8,11	52:15 53:6	134:25
124:9	42:23 43:3	142:7	70:12,13	<b>judged</b> 81:13
125:21	44:9,21	143:3	71:19,20	<b>July</b>
<b>issued</b> 126:3	45:4,10	145:3,5	72:14	8:14,16,17
<b>issues</b>	46:21 47:2	146:7	73:14	,18,19
7:19,22	48:2	147:15	74:3,14	96:13 97:4
9:3 63:1	51:5,17	149:16	75:8	119:2
96:9	52:7,12	150:18	76:1,17	128:1
133:15,25	53:5,18	154:12	89:15,17	176:17
143:9	55:13	155:3	90:19	179:6,7,9
176:21	56:15	156:8,10,1	93:21	181:7
<b>it'd</b> 76:17	57:16 58:3	8,19	95:12,13	<b>June</b> 1:22
151:8	59:15,16	159:16	98:2,16	8:3,4,6,10
160:1	60:2,8,24	160:9	107:7	,12 96:16
<b>item</b> 4:13	61:9 62:3	163:15,17,	108:21	136:17
45:18	63:19	19 164:20	109:17	148:19
46:17	64:6,18	165:9,20	111:3,4	179:4,12
137:10	67:17,20	168:14	112:9	<b>justify</b>
<b>items</b> 133:15	68:11,25	169:11	113:25	89:10
162:1	70:13	170:18	115:3	<hr/>
<b>iterations</b>	71:19	172:10,11,	116:16	K
102:9	72:10	20 174:13	117:9	<b>key</b> 65:22
<b>it'll</b> 34:11	73:17,23	175:5	118:5,24	67:6
47:18	75:1,7,11,	<b>I've</b> 27:13	121:4,5	<b>keys</b> 7:1,3
55:18,20	24 77:5,16	40:16,17	124:4	<b>kick</b> 140:15
59:11 62:7	79:9 80:3	45:14	125:5,24	<b>kilometre</b>
78:23	84:16	64:24	127:13	112:24
104:7	85:18 86:4	69:19	128:20	<b>kilometres</b>
122:10	87:12	110:25	129:15	13:21
153:24	89:2,17	135:3	131:11	73:21,22
<b>it's</b> 9:17	91:17	170:12	136:5	<b>kinetic</b>
10:24 11:7	92:19,22	174:12,14	137:13	50:17,20
12:17	93:1,3	175:8	138:3,22	<b>knew</b> 173:5
13:21	94:25 98:9	<hr/>	145:22	<b>knocked</b>
17:10	99:4,24	J	146:22	62:23
18:2,12,24	101:5,17	<b>Jen</b> 2:4 9:24	147:24	<b>known</b> 170:12
19:1,8	102:8	135:15	148:5	<hr/>
20:15,21	106:8	136:11,13	149:7	L
21:13,21	108:5,15,2	137:16	150:10,11	
25:25	5	139:4,16	151:1	
26:5,11,14	109:14,17,	151:14	152:1	
28:5 29:22	22 110:1	<b>jives</b> 126:13	153:15,16	
	111:4,12,1	<b>job</b> 83:12	155:20	
	9 113:23	170:5	157:16,17	
	114:9		159:23	
	115:16		160:12	

<b>lack</b> 159:3	23:11,13	<b>later</b> 8:13	99:11	19,22
<b>lacking</b> 63:7	24:22,25	11:25 12:6	107:5	156:10
<b>lagoons</b>	25:5 32:21	17:9 23:24	<b>levels</b> 38:7	157:5,15
112:24	35:16	26:7,22	69:19	159:8
175:8	63:8,12	40:2	81:5,13	161:3
<b>lake</b> 15:2	100:19	45:8,15	90:4	164:2,15
16:25	102:5,11	46:23	109:25	166:13,24
17:17	105:19	48:1,6	<b>lic</b> 95:16	167:4,22
29:18,21	110:15	54:8	<b>licence</b> 4:14	168:16
37:6,9,14,	121:9	109:11	5:19	169:15,18,
22,24,25	129:20	119:1	12:17,23	24 170:2
38:3,8,9	134:24	160:19	17:14	171:2
40:21 41:1	135:16,18	<b>latest</b> 8:13	23:10,11,1	173:16
53:23	140:8	124:7	4 24:22	174:7
55:21	142:12	160:16	25:1,5	177:22
56:3,4,5,2	163:5	179:3	28:3 32:21	178:1
3 59:7	165:19	<b>layout</b> 14:20	33:19,20	<b>licences</b>
60:6	168:1	<b>leaching</b>	34:25	168:14
62:8,18	180:14	48:21	35:1,16	177:12
72:13	<b>landed</b> 41:12	<b>lead</b> 9:9	42:10,16,2	<b>licensed</b>
73:21	82:3	<b>leaning</b>	4 43:12,20	85:12
75:18	<b>landfill</b>	180:8	44:17,18	<b>licenses</b>
76:14	21:22	<b>learn</b> 36:11	46:19	133:18
78:14,24	<b>lands</b> 29:5	163:24	47:1,8	<b>licensing</b>
80:7,16,23	165:4,6,11	<b>least</b> 126:25	59:5	42:14 89:9
,25	,13 168:9	<b>leave</b> 7:16	63:8,9,13	<b>life</b> 37:4
81:20,21,2	169:4	26:25 39:5	65:6,16	155:16
2,24 91:21	178:3	<b>leaving</b> 42:5	66:7,25	<b>lifetime</b>
92:6,7,18,	<b>large</b> 38:3	<b>legislation</b>	67:3 87:15	108:20
24 94:7	75:4	181:5	93:7,12,18	<b>light</b> 107:20
98:12	109:23	<b>less</b> 15:7	94:16 95:2	<b>lighted</b> 6:23
99:6,10	<b>largely</b>	34:3 70:7	100:19	<b>lighter</b> 17:2
112:23	52:15	81:3,6	101:10,22	<b>likely</b> 30:17
114:2	<b>last</b> 18:3	102:22	106:14,15	31:2,12,17
129:21	20:4,8	126:11	114:12	33:15
144:7	25:11 31:1	151:20	116:9,18	34:13,20
169:22	55:13	<b>let's</b> 40:2	122:20	35:17
170:1,8,18	68:21	129:13	124:11,12	37:16
,19	69:5,11	132:1	125:3,4,23	41:15
<b>lakes</b> 14:8	70:10	139:22	126:3,8,17	47:15
38:1 41:23	98:18	<b>level</b> 55:19	127:2,5	59:16
69:18	102:14	56:9,11,14	131:4	61:20,24
70:17	108:23	59:13,23	133:2	92:8,10
81:19 85:7	118:19	60:11	137:10	103:19
88:19	141:20	61:11,16	140:9	141:16
98:19	144:12	68:24	145:4,18,2	143:15
<b>Lake's</b> 37:16	164:21	71:21 76:6	0 146:20	157:21
<b>land</b> 1:2	174:25	82:21	148:3	<b>limit</b> 33:24
6:10 9:25	175:19,21	83:13,20	149:2,10	107:10
10:3,6,9,1	178:17		150:15	108:2
1 12:18,23	<b>lately</b> 70:9		152:19	
17:13			153:7	
			154:7	
			155:14,17,	

<b>limited</b> 4:6 31:18 46:7 107:13 137:5	153:4,12 154:18 174:3,17 177:1,19,2 3 178:9,17	<b>loadings</b> 80:8	<b>long-term</b> 3:17 24:23 25:3 27:2 32:18,22,2 3 35:15,18 36:3,4,14 80:8 94:23 104:8 132:13 139:23 140:7,15,2 2 141:2,11,1 4 142:16 143:16,25 147:12 150:5 155:7,11 158:6 161:18	75:14 81:13 83:24
<b>limits</b> 160:18	<b>listed</b> 172:23 173:3	<b>located</b> 6:22 7:1,11 13:20 82:24 163:20	<b>lower</b> 14:9,15,25 16:24 18:16 21:2 22:10,16 25:16 26:3,12 57:13 70:17 71:8 87:3 103:4,8	
<b>line</b> 13:14 21:17 23:9 25:3 31:25 36:11 47:18 58:13 77:14 88:3 93:13 115:18 123:13 145:1 146:14 154:15 157:2 160:4 181:1	<b>literally</b> 173:8	<b>location</b> 60:17 61:24 83:10 94:16 112:3,5 127:16	<b>lowered</b> 56:9 61:10 71:2,17	
<b>lined</b> 18:11 21:22 22:23 50:23 58:22,25 74:7 175:6	<b>litre</b> 79:16,17 81:6 84:24 85:12,17	<b>locations</b> 5:5 74:4 76:23 97:16 107:23 115:7 121:2 138:18 139:7 156:3	<b>low-</b> <b>permeable</b> 50:24	
<b>liner</b> 18:11,12 20:2 102:7,8 109:2 119:18	<b>little</b> 12:4 13:24 17:15 18:2 20:11 25:18 26:6,12,22 27:13 29:18 33:2 38:1 43:20 48:7 54:9 57:19 58:3 60:5 63:21 66:5 73:13,19 78:9 79:7 81:2 90:13,17 94:17 96:8 121:22 129:9 136:21 141:8 144:3 150:21 152:10 156:19 157:4,19 159:6 163:19 165:15 169:16 179:23	<b>logical</b> 144:14 147:19	<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>luckily</b> 25:22 64:24 <b>lunch</b> 7:8 129:6 132:2 134:11
<b>lines</b> 98:11 117:7 157:13 161:3 176:4	<b>liners</b> 18:11,12 20:2 102:7,8 109:2 119:18	<b>logistics</b> 97:8	<b>low-</b> <b>permeable</b> 50:24	
<b>link</b> 156:23	<b>linkages</b> 157:8	<b>long</b> 20:5 21:23 36:25 47:4 48:9,20 53:17 74:2 85:7 96:23 140:2 142:2 143:11 157:19 172:20	<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lunch</b> 7:8 129:6 132:2 134:11
<b>linkages</b> 157:8	<b>linked</b> 145:5	<b>longer</b> 29:1,13 94:2 144:21 156:3 170:4 178:14	<b>lowered</b> 56:9 61:10 71:2,17	
<b>list</b> 4:1 5:1,11,22 45:22 100:17 123:6 127:8 147:25 149:4	<b>load</b> 84:7 110:14 <b>loaded</b> 54:22 <b>loading</b> 50:18	<b>longer-term</b> 76:24	<b>low-</b> <b>permeable</b> 50:24	
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 49:7 <b>lose</b> 88:4 <b>lost</b> 118:17 150:4 <b>lot</b> 12:13,14 22:3 25:25 26:9 33:23 34:11,22 36:12 38:23 41:8,20 48:13 60:2 65:8,22 69:17 71:10 78:5 79:10,19 80:1 96:10 98:19 102:18,22 107:18,19 119:8,21 133:2,5 140:10 159:4 163:24 173:2,8,10 ,13 175:6	<b>lowered</b> 56:9 61:10 71:2,17
			<b>loose</b> 4	

133:21	107:15	114:24	<b>mean</b> 28:13	103:15
<b>maintain</b>	116:10,15,	<b>Matthew</b> 56:4	42:15	113:6
4:12 32:5	23 129:3	<b>Matthews</b>	109:16	119:7
46:15	140:13,18	56:4	149:4	139:16
59:22 60:3	141:21	169:22	<b>meaningful</b>	140:6
75:2,3	143:1,7,24	170:8	117:19	171:19
94:2 137:9	144:15,18,	<b>max</b> 18:18	139:2	<b>mentioning</b>
165:5,9	23	<b>maximum</b>	<b>means</b> 31:23	81:19
<b>maintained</b>	146:18,25	15:16	62:11	<b>message</b>
24:16	147:4,13	59:15 62:7	<b>meant</b> 143:23	177:8,13
38:14	150:3	72:23 73:4	<b>measure</b> 5:10	<b>met</b> 20:5
<b>maintaining</b>	154:3	84:24	97:25	27:18 50:6
31:18	156:1,23	<b>may</b> 8:3	139:11	110:9
83:12	158:1,8,15	37:15	<b>measures</b>	114:22
168:5	,23 159:13	44:11	99:10	<b>metal</b> 48:21
<b>maintenance</b>	<b>management's</b>	56:13	133:11	50:18
23:20	32:17	69:25	<b>meet</b> 55:16	<b>metals</b> 36:21
31:20	47:20	70:1,7	77:7 82:25	41:21
32:10	<b>manager</b>	125:14	85:15	<b>method</b> 78:17
103:14	10:17	126:2	86:21 90:5	110:11
106:10	<b>mandate</b>	127:11,15,	92:4 96:2	<b>Metis</b> 135:14
143:12	165:3,9	22 130:1	129:13	176:21
<b>major</b> 31:6	<b>map</b> 37:18	168:15	132:2	<b>metre</b> 56:10
53:10	65:2	171:2	160:5	59:14
74:15	<b>mark</b> 24:9	<b>maybe</b> 20:18	<b>meeting</b> 6:7	70:5,6
<b>majority</b>	30:3,16	31:3 34:12	28:24 83:8	<b>metres</b>
18:5 26:20	<b>marked</b> 181:7	36:8 46:22	89:17,18	15:6,12,21
28:15	<b>material</b>	47:19 48:7	112:17	17:15,25
36:24	18:20	89:3 96:20	114:19	19:24
69:15	19:25	103:17	132:8	25:11
<b>makeup</b> 89:23	20:10	113:7	163:22	28:17 34:1
<b>manage</b> 31:20	21:23 22:1	115:13	165:18,19	56:10
32:23 36:4	25:16 29:3	144:20	166:23	59:12
102:12	49:2,8	149:5	<b>meetings</b>	62:8,10,18
164:9	50:25 51:2	153:10	167:10	67:25
<b>management</b>	57:20	169:19	<b>mental</b> 65:1	71:14
3:14	58:14 69:8	172:15	<b>mention</b> 17:9	79:13
13:1,19	74:8	174:3	40:20 62:2	112:16
19:7	102:18	<b>McPherson</b>	67:5	<b>M-hm</b> 93:15
24:6,11	103:3,7	9:19 11:4	104:19	<b>micrograms</b>
27:10,16	109:9	40:12,13	<b>mentioned</b>	79:16,17
28:23	119:13,17	54:13 55:2	16:21	<b>microphone</b>
30:5,7	121:17	64:13,16,2	32:20	12:9
31:2,10,25	<b>materials</b>	1,22 67:2	44:21	<b>middle</b> 173:5
32:18,24	18:22	68:16	48:11,25	<b>mid-November</b>
34:9,17,19	48:18	77:15	50:22 70:4	160:15
,24 35:10	74:20	99:24,25	71:1,9,16	<b>mid-process</b>
36:9	122:2	106:3,4	74:25 83:7	125:22
100:7,11,1	<b>matrix</b>	132:3,6,19	85:19	
7 102:3	67:6,7	,22	89:19 92:1	
104:8,9	<b>matter</b>	134:8,12		

<b>milestone</b>	21:20	<b>mitigation</b>	13:1	<b>month</b> 85:13
30:3	29:22 41:7	67:6	24:12,14,2	103:18
<b>mill</b> 3:7	57:9 62:5	133:11	3 25:3	118:12
14:22	78:20	<b>mitigations</b>	27:2 30:8	124:6
17:10 26:4	155:6	65:25	31:4,16	<b>monthly</b>
29:17,21,2	160:13	<b>mixed</b> 16:3	32:23	31:4,12
3 49:18	<b>Minerals</b>	<b>MMER</b> 86:16	33:1,3,5,1	34:10 83:2
53:22	129:20	<b>mo</b> 147:12	2 34:11,25	84:23
54:17	<b>mines</b> 82:24	<b>mobilization</b>	35:3,9,13,	158:24
55:7,11,19	<b>Mine's</b> 55:24	24:3	15,18	<b>months</b> 47:15
,21	<b>mini</b> 18:25	47:21	36:4,9,14	103:22
56:8,18,22	<b>minimal</b>	48:10	47:21	104:4
57:11	18:25	49:21 50:9	49:21 50:9	124:7
58:4,11	21:12 51:3	63:2 70:3	63:2 70:3	151:20
59:7	74:1	76:24	76:24	152:3
60:9,14	<b>minimize</b>	81:16	81:16	160:2
61:1,11,15	19:8	87:17	87:17	<b>Morag</b> 2:16
,18,22	121:19	88:13	88:13	9:19
62:11,12,1	<b>mining</b>	93:10	93:10	11:2,4
6,17 63:7	22:3,4	94:23	94:23	39:12,20
64:1,7	37:7 38:6	103:24,25	103:24,25	40:9,12
65:11,24	55:24	113:19,20	113:19,20	54:13,24
67:5,24	61:16 81:4	132:13	132:13	55:2
68:2	<b>minister</b>	133:3,21	133:3,21	64:13,16,2
69:22,25	5:19	138:12,19	138:12,19	0,21 66:23
70:17	164:3,15	139:23	139:23	67:2
71:2,6,21,	166:14,25	140:2,7,15	140:2,7,15	68:12,16
22 72:9,12	167:18	,22,23	,22,23	77:14,15,1
73:1,20	169:1	141:1,2,7,	141:1,2,7,	6 88:3
76:13	178:7	14,21	14,21	99:24,25
144:7	<b>Minister's</b>	142:3,16	142:3,16	100:15
<b>milligram</b>	128:12	143:16	143:16	106:3,4
85:12,16	<b>minor</b> 50:4	144:18	144:18	132:3,6,7,
<b>milligrams</b>	52:20	147:12,17	147:12,17	17,19,22,2
81:6 84:24	106:11	149:15,16,	149:15,16,	3
<b>million</b>	108:6	17 150:16	17 150:16	134:2,8,12
15:12	<b>minute</b> 59:9	151:5	151:5	,14
17:15 21:5	60:17	154:2	154:2	<b>morning</b> 6:4
34:1	<b>minutes</b>	155:4,7,12	155:4,7,12	9:17 80:19
79:13,24	129:12	156:3	156:3	135:7
<b>millpond</b>	132:18	157:20	157:20	136:12,22
133:9	<b>mirror</b> 63:12	158:6,15	158:6,15	<b>mostly</b> 80:3
<b>mind</b> 11:2	<b>miscellaneous</b>	161:18	161:18	82:4
65:1 73:18	162:1	169:23	169:23	<b>motivates</b>
132:17	<b>miss</b> 53:17	171:3,6,20	171:3,6,20	85:10
145:13,16,	<b>mitigate</b>	,23,24,25	,23,24,25	<b>move</b> 39:6
25 149:3	121:15	172:9,10	172:9,10	54:16,20
<b>mine</b> 10:17	<b>mitigation</b>	173:3,9	173:3,9	55:7 76:23
12:22	121:15	174:4,18	174:4,18	100:6
13:3,7,25	<b>monitor</b>	175:3,11,1	175:3,11,1	108:1
14:5,8,12	36:9 49:16	4	4	111:14
16:14	99:11,12	178:10,18,	178:10,18,	125:9
	<b>monitoring</b>	21	21	
	3:17 5:22			

139:22	89:15,19	165:18	<b>none</b> 15:22	<b>number's</b>
142:25	91:22	<b>natural</b>	66:13	26:9
143:16	92:25	29:25 51:8	80:19,20	<b>nutrients</b>
150:1,2	93:1,15	59:24	81:4	110:17
161:25	94:5,14	144:6	<b>non-federal</b>	<hr/>
163:7	99:8,14,16	<b>naturally</b>	178:4	O
174:6	100:8,13	55:25 56:2	<b>non-SNP</b>	<hr/>
<b>moved</b> 31:12	105:16	75:20	178:20	<b>Oaks</b> 14:16
41:21 49:6	109:12,14	<b>nature</b> 89:21	<b>noon</b> 129:5	<b>objections</b>
<b>moving</b> 27:9	119:24	<b>nearest</b>	<b>normally</b>	176:16
96:23	121:7,21	112:3,5,22	29:24	<b>objective</b>
131:7	122:21	113:5	<b>north</b> 14:21	116:12
154:25	123:14	114:5	23:2,8	143:6
161:1	124:8	<b>necessarily</b>	56:2	<b>objectives</b>
162:14	125:15,19	148:9	115:20	16:6 24:15
165:24	136:3	152:18	135:13	27:17,18
172:19	139:24	<b>necessary</b>	176:20	28:25
<b>moving-</b>	140:4	109:24	<b>northeast</b>	29:16 30:1
<b>forward</b>	142:8	<b>negative</b>	13:21	32:6 50:6
45:18	143:3	80:22	<b>northeastern</b>	55:17
<b>muddiest</b>	144:1,2	<b>neighbouring</b>	<b>ly</b> 170:21	89:19 94:3
84:7	147:8,9	115:11	<b>northern</b>	116:13,21
<b>Mullaney</b> 2:7	149:12,13	<b>nervous</b>	82:11	117:2,13,2
10:10	157:17,18	82:20	<b>Northwest</b>	0 121:8
72:10 74:9	158:17	<b>network</b> 4:16	69:16	144:10
76:9 91:15	162:10,19	5:4 91:1	<b>note</b> 7:8	<b>obvious</b>
111:6	166:19	97:15	79:9 81:18	165:7
116:5	170:6	137:21	<b>noted</b> 31:17	<b>obviously</b>
117:5	171:11	139:6	<b>nothing</b>	17:5 20:17
135:24	172:6	<b>nice</b> 27:1	54:14	21:3 26:24
142:23	174:8	30:25	66:15 72:5	28:14
143:21	175:12	57:14 85:8	104:11	31:11 33:3
<b>Murray</b> 2:13	176:5	103:11	163:3	56:15
10:14	177:3	<b>nineteen</b>	<b>notice</b> 17:18	58:1,18
11:9,21	<b>Murray's</b>	100:20	<b>noticeable</b>	69:14
12:12	11:18	<b>ninety</b>	69:16	81:25
39:9,10,14	54:18	101:17	80:25	113:16
40:5	114:2	124:22	<b>noticed</b>	119:10
41:4,25	<b>muster</b> 6:24	125:3	69:19,23	150:7,13
42:18	<b>MV2009L80008</b>	126:5	70:8,11,16	164:24
45:10 47:7	46:19	151:19	169:21	<b>occasional</b>
48:3 53:5	137:10	<b>nitty-gritty</b>	<b>November</b>	92:8
55:6	<b>MV2009L80008</b>	38:25	20:18	<b>occupancy</b>
64:6,12	.46 4:14	<b>nobody</b>	<b>now's</b> 6:7	109:9
65:2 66:13	<b>MVLWB</b> 2:3	152:12	136:24	<b>occur</b> 109:22
68:8,18,25	86:8	<b>nods</b> 129:4	<b>NSMA</b> 2:18	146:15
69:4,11	<b>myself</b>	<b>non</b> 163:20	<b>NT</b> 1:21	<b>occurrences</b>
71:1 73:11	132:15			110:9
74:25 75:7	<hr/>			<b>Oceans</b> 9:18
77:20,23	N			40:8,13
86:5,11,18	<b>Nathen</b>			
,22 88:8				



64:8,10,22	39:17,18	152:25	52:20	<b>ORS</b> 54:22
99:23,25	44:7 48:4	<b>online</b> 8:25	<b>opportunity</b>	63:17
106:4	52:3	11:8	9:2	68:14
132:7,23	54:15,22	39:12,22	11:14,20	86:13
134:4	57:15	63:19 86:6	39:25 40:2	87:5,14
<b>o'clock</b>	60:16 64:5	142:11	53:17	106:16
132:8	66:22	145:8	93:25 94:9	114:11
<b>October</b>	69:3,10	149:6	95:25 96:4	162:12
20:17,18	72:7 74:9	<b>onsite</b> 78:19	97:5 99:1	163:18
51:25	76:9	101:13	127:6	<b>others</b> 26:21
<b>offhand</b>	77:3,12,17	106:25	128:2	27:5
68:19	87:8 91:15	110:23	139:2,20	39:12,21
<b>office</b>	99:21	125:12	145:19	138:19
165:4,6,11	100:4,5	143:10,12	175:25	142:16
,13 168:9	101:19	149:18	<b>opposed</b> 87:2	<b>otherwise</b>
169:4	103:25	159:18	113:20	45:22
178:3	105:5,15	160:16	<b>opposite</b>	129:13
<b>officer</b>	106:6	175:4	29:24	131:5
95:21	111:6	<b>onto</b> 32:2	120:5	133:24
<b>offices</b>	115:24	<b>open</b> 7:3	<b>option</b>	159:6
168:1	116:1	85:25	59:6,10	<b>ourselves</b>
<b>officially</b>	124:14	138:15	60:13 90:4	103:14
5:15	128:25	<b>opened</b> 29:22	<b>options</b> 59:3	165:6
128:13	131:25	<b>operated</b>	107:13	<b>outcome</b>
164:7,12	134:2,10,1	160:16	<b>order</b> 28:9	34:15 93:2
166:6	9 136:9	<b>operating</b>	52:23	<b>outflow</b>
<b>officials</b>	137:18	82:24 85:2	58:17	94:19
163:23	138:22	<b>operation</b>	62:19 96:1	<b>outlet</b> 76:13
<b>offline</b>	139:15,22	14:1	127:25	94:11
145:8	140:21	106:10	140:25	<b>outline</b> 13:4
162:19	142:7,23	108:24	<b>ore</b> 14:6	146:1
<b>oh</b> 20:8	152:9	109:20	<b>organisms</b>	168:17
31:15 52:6	155:2	131:17	36:23	<b>outside</b> 6:22
63:4 64:16	160:23	<b>operational</b>	<b>organization</b>	115:9
81:23	161:15,22	83:9 152:2	6:15 135:2	131:19
101:24	163:4,10,1	<b>operations</b>	<b>original</b>	172:1
102:25	5 167:14	12:21	13:9	<b>outstanding</b>
103:17	169:5	18:18	21:5,20	103:16
129:14	171:10	27:25 28:2	38:13 41:6	133:14,25
132:5	174:15,24	38:7 49:1	42:22	<b>overall</b>
178:16	175:1,18	114:4	43:10,12	49:20,24
<b>O'Kane</b> 72:17	178:25	130:10	62:23 67:4	50:4,5
<b>okay</b>	<b>one-by-one</b>	131:15	70:22 92:2	51:11,22
10:19,25	136:16	139:1	150:20	52:6 72:15
11:6	<b>ones</b> 111:14	147:19	<b>originally</b>	73:7
12:7,12	123:20	<b>opinions</b>	15:7 17:20	74:17,25
15:3 17:10	145:8	108:11	27:11 47:4	76:3 81:12
20:13 23:8	178:19	<b>opportunitie</b>	56:4 69:22	89:22
31:21	<b>ongoing</b> 4:20	<b>s</b> 7:23	70:1 78:7	117:3,20
34:15	50:17,20		102:10	121:8
	91:7			
	131:13			
	137:23			

125:7	147:16	173:22	90:12	0 17:13
130:4	153:20	175:16	95:20 97:7	21:21
131:20	<b>particularly</b>	176:12	115:8	23:21
138:5,8	13:13	178:23	148:25	24:1,3,9,1
<b>overland</b>	48:16	<b>pay</b> 31:7	165:1	1
107:17,25	64:11	<b>paying</b>	<b>period</b>	27:9,10,15
121:11	145:16	174:14	3:5,8,11,1	,16,19
<b>overtop</b> 18:9	<b>parties</b> 5:21	<b>peak</b> 15:15	5,19 14:3	30:4,9
<b>overview</b> 9:8	130:24	73:8	24:13 39:8	32:7,18,24
11:25 12:5	164:8,16	<b>people</b> 9:5	64:4	33:2,16
13:12,18,1	166:17	56:15,25	86:3,19,25	34:12
9 40:5	168:4	63:14	103:14,19	47:13
91:25	179:2	165:22	105:25	52:12,14
<b>oxidation</b>	<b>pass</b> 162:4	168:13,19	142:6	60:7 64:25
15:23	<b>passed</b> 47:2	<b>per</b> 34:25	<b>periodic</b>	74:18
<hr/>	168:12	35:1	37:15	103:19
P	<b>past</b> 20:16	62:8,11,18	<b>periods</b>	104:8,9
<b>package</b>	109:19	79:16,17	31:16 76:8	116:15,23
118:9	128:9	81:6 84:24	90:7	138:12
119:1	133:3	85:12,17	<b>permanent</b>	140:13,18
<b>pads</b> 22:4,6	138:10	126:4	71:5,18	141:21
<b>PAG</b> 15:21	<b>path</b> 29:23	140:20	<b>permit</b>	143:7,17,2
48:19	<b>pathway</b>	158:22	12:18,23	3,24
<b>page</b> 3:2 4:2	29:19,20	159:7,8	17:13	144:10,14,
5:2 13:12	55:21 56:6	169:4	23:12,14	16 147:13
50:14	59:2	172:14,24	24:22,25	150:1
77:24	<b>pathways</b>	181:4	25:5 32:22	154:3
167:21	72:15	<b>percent</b>	35:16	158:1,8,16
<b>pan</b> 81:10	<b>PAUSE</b> 10:22	18:1,10,13	63:9,12	162:9
<b>paperclip</b>	52:1 77:1	26:8,10,14	100:19	<b>phases</b>
63:21	87:25 88:6	73:23	140:9	116:25
<b>parameters</b>	99:19	123:19	<b>permissible</b>	146:2
4:23 5:7	108:13	171:19	115:15	157:9,10
50:8 91:12	111:10	<b>Perfect</b> 11:6	<b>permitted</b>	179:25
97:19	115:22	77:17	12:17	<b>PHC</b> 16:1,7
138:1	128:23	136:9	84:20,22	19:24 20:9
139:8	139:13	177:15	85:11	21:25
141:7,19	142:21	<b>perform</b>	130:11	27:23
<b>pare</b> 33:16	143:19	31:20	<b>person</b> 135:9	172:12
<b>partially</b>	146:5	<b>performance</b>	<b>perspective</b>	<b>PHCs</b> 20:8
19:11,12	148:21	80:10,13	94:24	<b>phone</b> 2:16
26:20	151:12,24	89:16,18	113:3	9:20 10:20
<b>participate</b>	152:7	<b>performed</b>	152:2	11:4
181:10,11	156:14	106:25	164:18	39:12,20
<b>particular</b>	159:21	<b>performing</b>	167:24	40:9,12
74:7 93:24	160:7,21	30:13	173:18	54:12,13
129:23	161:13,20	143:11	180:1	55:2
130:18	163:13	<b>perhaps</b> 9:14	<b>phase</b>	64:13,16,2
	169:9	45:20	13:2,13	1 67:2
	170:24	49:21 86:8	15:4	68:16
	171:15		16:14,18,2	77:14,15,2
				5 88:3
				99:24

100:16	110:13,19,	<b>plants</b> 80:11	93:5,12,18	22:13 23:8
106:3	22 111:1	82:23,24,2	94:13,18	25:16 26:4
132:3,6,19	116:10	5	95:15	29:17,21,2
,22	122:14,25	<b>play</b> 168:15	100:2	3 49:18
134:8,12,2	123:11,12	<b>please</b>	101:4	53:22
0 136:8	124:16	6:14,15	102:17	54:17
162:10	125:6,7,10	7:15	108:4	55:8,11,19
175:21	,21	120:12	114:1	,21
<b>phonetic</b>	126:1,7,12	135:2	115:7	56:8,18,22
72:18	127:1	137:7,20	118:7	57:11,12,1
86:17	129:17	139:6	120:1,14,1	3,17
130:17	131:20,21	157:14	7,22 126:6	58:4,5,11,
140:20	133:2,22	<b>pleased</b>	128:7,19	12 59:7,24
170:1	136:17	177:7	129:5	60:3,9,14,
<b>photo</b>	140:23	<b>plowing</b>	130:18	16
68:9,19	146:18	161:24	133:15,17,	61:1,11,15
<b>photograph</b>	155:5,16	<b>plugged</b>	25 142:1,4	,18,22
14:11	156:4,6	165:22	144:14	62:11,13,1
15:14	157:20	<b>plume</b> 17:3	150:5	6 63:7
16:12,22	158:6,15	<b>plus</b> 82:19	156:18	64:2,8
17:2	159:13	<b>poi</b> 142:1	162:24	65:12,24
20:22,24	170:14	<b>point</b> 6:25	163:17	67:5,24
57:2 69:9	<b>planned</b> 5:13	15:19	167:20	68:2
<b>photographs</b>	34:5 50:16	17:19 23:1	168:23	69:23,25
19:19 57:1	153:13	29:6 31:13	169:6	70:17
<b>physical</b>	154:22	32:13,16	180:25	71:2,6,21,
16:17 53:2	<b>planning</b>	33:25	<b>pointed</b>	22,23
<b>phytoplankto</b>	11:15	38:20	86:22	72:9,12
<b>n</b> 81:11,15	181:1	40:14	<b>points</b> 40:4	73:1,20
<b>picture</b>	<b>plans</b> 3:14	49:22	50:7	75:19
60:21	5:12	50:11	54:5,11	76:5,7,13
62:17	100:7,11,1	53:25	65:22	103:5,8
<b>pieces</b> 65:17	7 102:3	54:14,22	93:23	144:7
<b>pipe</b> 17:4	104:18	57:3 58:11	106:20	<b>ponding</b>
53:20 79:1	107:15	59:22 60:4	138:21	75:3,10,23
<b>pipes</b>	127:14	61:3,17	142:15	,24
153:5,6	128:9,10	66:20 72:6	145:10	<b>ponds</b> 14:13
<b>placed</b> 49:13	129:3	75:9 78:25	146:2	17:5 21:1
173:4	133:19,22	79:18 80:1	148:13	75:18
<b>placement</b>	145:11	81:21,23	154:2	<b>portion</b>
74:19	146:14	82:4,7,13,	156:25	18:8,12
<b>places</b> 69:20	148:10	17,19,21	167:18	20:20
<b>plan</b> 33:22	152:21	83:1,9,12,	169:2	22:8,11
40:24 41:7	153:5,13	13 84:8,19	179:17	55:8
43:11	154:20	85:1,6,9,1	180:2	<b>pose</b> 81:7
76:24	156:21	0,15	<b>polishing</b>	<b>position</b>
100:23	171:4	86:14,15,2	115:10	107:9
101:12,19	177:25	1 89:20	<b>pond</b> 3:7	<b>possibility</b>
106:11	181:18	91:21	14:9,10,14	144:17
	<b>plant</b> 14:7	92:3,17,19	,15,24,25	<b>possible</b>
	21:11 68:3	,24	16:23,24	7:21 19:1
	69:6 80:6		17:10	39:21 96:1
	83:4 90:4		18:16 21:2	

97:3	115:6	143:15	,23	114:3
109:18,21	116:8	<b>prediction</b>	39:11,15	119:8
127:21	117:16	72:23	52:6	133:1
128:2	141:12	92:17	54:19,21	144:4
148:2	148:3	<b>predictions</b>	55:5	156:20
<b>possibly</b>	170:15	36:19 37:3	68:7,13	159:25
51:25	<b>potentially</b>	38:13,16	71:1	<b>previously</b>
81:15	15:20,22,2	50:18	77:20,22	66:1 144:5
<b>post</b> 36:12	5 38:9	<b>pre-existing</b>	86:11,23	<b>prim</b> 84:14
38:20	80:17	80:18	91:24	<b>primarily</b>
39:12	83:15	<b>preference</b>	100:9,11	27:3,5
53:13 95:4	112:5	127:4	139:24	84:14
104:5	<b>potentials</b>	<b>preferred</b>	140:2	170:11,20
131:7	92:7,11	165:24	<b>presentation</b>	<b>primary</b>
151:18	<b>Potten</b> 2:4	<b>pre-hearing</b>	s 8:16,17	18:17 59:6
<b>post-closure</b>	9:24	8:11	9:9 54:21	90:2
93:10	135:15	179:10	57:6 121:7	<b>prior</b> 7:20
<b>posted</b>	136:13	181:14	144:4	76:14
39:20,22	137:16	<b>pre-mining</b>	179:7,15	96:15
63:18,19	139:4	37:12	<b>presented</b>	124:19,23
68:13	151:14	55:19,20	66:13	135:1
105:13	<b>Powder</b>	60:10	<b>presuming</b>	139:19
128:11	37:14,25	71:14	155:12	181:6
<b>posting</b> 6:19	38:8	80:23	<b>pretty</b> 13:11	<b>probably</b>
<b>post-</b>	81:2,12,21	<b>preparations</b>	14:12	11:24 19:3
<b>issuance</b>	92:7	155:21	15:10	21:9
125:2	<b>practices</b>	<b>prepare</b> 98:7	16:23	24:3,21
<b>post-</b>	106:23	145:21	18:18	25:4 26:14
<b>remediatio</b>	<b>pre</b> 35:8	21:13	20:23	30:23
<b>n</b> 35:8,9	44:18	22:17	21:13	34:11
36:15,19	61:15	23:10 24:8	22:17	40:19
38:17	<b>precautionar</b>	32:16	23:10 24:8	41:15,16,2
47:12,24	<b>y</b> 56:14	33:14	32:16	2 42:2
80:9 92:3	<b>precautious</b>	38:3,22	33:14	44:20 58:7
93:23	62:24	40:21	38:3,22	62:22 84:9
101:8	<b>precedence</b>	47:17	40:21	96:21
103:24	130:16	65:1,4	47:17	110:19
104:2	<b>precipitatio</b>	74:1 75:12	65:1,4	113:17
141:23	<b>n</b> 25:14	81:22	74:1 75:12	119:2
<b>potable</b>	29:6 82:24	128:16	81:22	124:11
107:17,24	<b>predict</b>	133:7	128:16	125:14
114:7	110:3	140:6	133:7	126:2
169:23	141:10	158:21,24	140:6	131:18
170:9	<b>predicted</b>	<b>present</b>	158:21,24	143:4
<b>potential</b>	36:18,21	20:14	<b>prevent</b> 61:1	144:13
31:1 49:4	65:24 81:7	49:11 85:5	75:10 83:8	151:2,7
72:18	87:22	156:9	162:14	156:7
84:18	88:23	<b>presentation</b>	<b>previous</b>	157:3,5
109:7	141:13	3:4,7,10,1	66:14 69:6	161:10
110:7		3,17 9:8	80:2 81:9	171:24
114:7,14		11:9,11,19	83:17	174:1
			104:13	175:6

<b>problem</b> 123:18 125:23 127:12 132:21 171:12 172:20 176:19	<b>professional</b> s 41:9 <b>profile</b> 58:24 <b>program</b> 4:16 5:4 12:25 24:23 31:11 33:3,6 34:6,10,12 ,14,20 35:3,9,18 36:14 37:23 49:3 50:9 84:12 91:1 97:16 104:7 137:21 139:6 141:14 144:9 147:12 149:15,23 158:24 171:6 172:19	158:8,16 164:1 176:1 178:5 <b>projects</b> 107:12 <b>promised</b> 179:1 <b>prompted</b> 102:23 <b>prone</b> 92:10 <b>proper</b> 28:9 165:21 <b>properly</b> 58:23 <b>proponent</b> 9:7 76:21 133:17 164:18 168:6 <b>proponent's</b> 8:5,15,17 10:15 179:6 <b>propose</b> 89:11 111:2 138:17 161:7 <b>proposed</b> 33:21 47:5,14 66:12 67:12 81:9 90:14 92:24 131:2 133:7 136:23 <b>proposing</b> 47:3 67:18 78:7 103:18 107:9,25 125:8 151:5 <b>protect</b> 102:7 <b>protection</b>	4:20 37:4 91:7 137:24 <b>protective</b> 51:3 62:4,19 94:17 <b>provide</b> 4:10,15 5:22 11:14 44:24 46:12 76:22 90:9,20,25 95:24 96:9 98:25 99:2 103:22 104:22 105:12 115:14 116:19 123:17,18 125:15 127:20 133:18 137:7,20 146:23 147:4,25 148:14,18 151:17 152:25 153:17,18, 25 158:14 161:9 162:11 164:10 174:17 <b>provided</b> 7:9 42:23,25 43:11 65:10 66:12 87:4 101:6 112:12 121:23 122:23 125:6 126:4 133:6,23 162:20,22 180:4,6 <b>providing</b> 43:24 89:9	90:12 96:1 117:19 125:21 151:17 <b>proximity</b> 58:2 116:14 <b>prudent</b> 50:8 89:13 <b>public</b> 6:20 7:20,25 8:16,18 23:16 43:6,13 124:2 179:7,8 181:5,10,1 9 <b>pull</b> 148:10 <b>pulled</b> 67:16 <b>pump</b> 59:7 62:11,15 <b>pumping</b> 59:21 60:5 62:10,14 <b>purchased</b> 14:16 <b>purpose</b> 5:23 7:18 169:22 174:5,19 178:10,18 <b>purposes</b> 145:3 161:2 169:25 <b>pushed</b> 117:17 <b>putting</b> 179:15 <hr/> <b>Q</b> <hr/> <b>quality</b> 3:10 4:4,17 24:14 33:9,11 38:17,20 40:22 46:4 48:16
--	---	---	--	--

53:13,19	119:8	177:17	48:12	11:7
54:4 76:15	129:16	<b>quite</b> 13:8	143:7	39:10,18
77:19,22	142:6,24	19:21	144:11	43:18
78:1 86:8	150:21	30:20	<b>reaches</b> 23:5	45:17 48:4
87:20,21	153:11	41:13 47:4	<b>reads</b> 124:22	50:12 52:3
88:13	163:16	51:2 64:25	<b>ready</b> 6:4	54:2 64:6
89:10,11	167:20	65:19 73:6	18:24	67:20
91:3 100:2	171:18	78:10	126:20	68:11 72:7
103:23	174:24,25	82:9,17	128:1	77:3 86:4
110:7	<b>questioning</b>	83:11	149:11	87:9 90:10
111:24	145:2	89:20 97:3	<b>real</b> 38:24	93:3 96:6
112:4,21	<b>questions</b>	107:23	<b>realize</b>	99:13,21
114:13	7:24 9:3	160:18	106:13	105:15
121:3	11:17 15:3	176:2	<b>really</b> 55:1	108:3
137:3,22	39:6	<b>quo</b> 93:8	67:4 69:16	110:2
140:19	40:4,14,16	_____	70:3 78:2	111:12
143:14	43:14,17	R	81:14	113:6
<b>quality's</b>	44:6 52:5	<b>rain</b> 31:6	83:11 92:4	115:24
53:24	54:7,10	<b>raised</b> 180:2	96:7 103:9	120:8
144:19	64:7,11	<b>ran</b> 79:20	104:12,18	121:4
<b>quantities</b>	66:20 68:6	82:2	110:16	123:1
87:2	72:8 73:10	<b>range</b> 103:4	117:13	124:13
111:24	86:1,7	<b>rate</b> 62:7	127:11	126:15
113:4	87:10,14	66:8 73:25	130:21	128:4,21,2
171:8	93:7 99:22	141:11	133:14	5 130:12
<b>quantity</b>	100:1	<b>rates</b> 66:4	153:22	131:12
112:4,11	101:24	<b>rather</b>	154:5	132:1,4
<b>quarries</b>	105:17,22,	116:23	164:22	134:1,19,2
30:12	23 106:2,5	163:17	179:18	3 135:22
<b>quarry</b> 19:4	112:6	165:4	181:15	136:7
25:15 49:1	116:4	<b>rationale</b>	<b>reason</b> 6:13	138:7
121:17	129:2	4:10,19	40:23	139:15,16
<b>quarrying</b>	132:14	44:2 46:13	57:23	142:7,8
48:18,25	139:18	47:5 90:13	69:14	144:24
<b>question</b>	142:15	91:6 93:20	82:20 90:2	145:23
3:5,8,11,1	155:1	130:22	105:2	147:21
5,19 30:16	161:17	137:8,23	107:11	148:16,23
39:8 42:7	162:6,17	161:10	123:22	152:9
44:12	163:2,5,8	178:21	175:8	154:4,25
45:16 48:5	169:5,14	<b>re</b> 1:7	<b>reasonable</b>	156:16
64:4 68:22	179:16	3:7,10,13,	47:17	157:16
69:21	180:15	17 49:18	174:9	160:23
70:13,25	<b>quick</b> 8:1	51:8,12	<b>reasons</b> 59:8	161:15,22
72:11 86:3	9:13 13:4	140:2	85:19	162:25
88:9	40:16 42:7	165:22	88:21	163:15,16
91:17,18	48:5 54:18	178:15	103:21	166:20
98:5,8	77:13 88:2	<b>reach</b> 85:10	165:7	167:5
105:25	91:16	<b>reached</b>	178:15	168:22
111:7,15	111:7	32:4,24	<b>Rebecca</b> 1:13	174:11,12,
112:10	<b>quickly</b> 6:21		2:3 6:8	23 175:18
117:23	81:14		10:8,24	176:14,22
118:19	127:11			177:15,16
	128:16			178:25
				181:2,3

<b>rebound</b> 72:1	46:15	103:1	164:9	13:18
<b>recall</b>	66:24	<b>reducing</b>	<b>regulatory</b>	22:11,14
42:1,22	107:1	110:16,17	6:9 24:21	25:6
59:4 82:14	110:6,12	<b>reduction</b>	42:21	26:3,10
88:23	115:18	103:6	85:11	53:9
<b>receive</b>	137:8	<b>re-</b>	95:21	55:13,14
118:21	168:8	<b>establishe</b>	165:1,3	90:6
<b>received</b> 8:5	<b>recommendati</b>	<b>d</b> 144:7	178:6	116:22
128:9	<b>ons</b> 43:24	<b>reference</b>	<b>rela</b> 167:25	118:10
177:13	65:8 82:7	6:20 39:23	<b>related</b> 27:3	119:12
<b>receivership</b>	87:14	<b>refine</b> 34:21	156:20	125:13
14:17	93:19	104:7	162:7	141:18
<b>receiving</b>	98:21	141:18	<b>relates</b>	<b>remains</b>
114:6	115:1	159:10	134:3	108:9
<b>recent</b> 88:25	130:20	<b>refinement</b>	145:17	<b>remarks</b>
<b>recently</b>	161:8	150:8	<b>relating</b>	132:25
68:20	163:9	<b>reflect</b>	116:11	181:21
163:22	179:17	121:25	<b>relationship</b>	<b>remedia</b>
166:22	180:13,21	<b>reflected</b>	120:5	162:9
<b>recessing</b>	<b>recommended</b>	67:11	164:22	<b>remedial</b>
77:9	65:15	<b>refreshments</b>	167:25	24:15
134:16	98:15	7:5	<b>release</b>	27:17
<b>recharge</b>	<b>recommending</b>	<b>regard</b> 68:22	107:5	28:25
59:24	95:9	162:24	124:1	29:16 30:1
60:2,10	<b>record</b>	180:23	128:1	32:6 40:24
71:10	109:15	<b>regarding</b>	<b>released</b>	43:11
<b>reclaim</b>	135:11	40:18	49:15	52:25
101:14	164:8	67:24	118:25	55:17
<b>reclamation</b>	165:12	86:14 87:6	119:1,3	78:12
25:15	<b>recorded</b>	111:19	125:16	110:22
100:23	6:13,19	113:14,15	<b>relevant</b>	116:13,22
101:12,18	8:8 135:1	162:17	94:12	117:2,12
129:17	<b>recover</b>	179:24	139:1	144:10
131:21	37:1,10	180:21	153:19	<b>remediation</b>
<b>Recognizing</b>	38:7 81:13	<b>regards</b>	<b>relief</b> 73:19	12:22
117:1	85:7	49:23	163:24	13:4,12
<b>recommence</b>	<b>recovery</b>	64:11	<b>relieved</b>	15:8 16:14
127:15	141:11	100:2	163:24	20:13
<b>recommend</b>	<b>red</b> 25:3	129:17	<b>re-looked</b>	23:21 24:4
5:4 32:14	<b>redone</b> 42:8	130:6	103:12	27:9,15,19
97:14	<b>reduce</b> 71:21	138:4	<b>remain</b> 29:7	28:22
106:17	103:1	150:12	37:17 62:4	30:4,9
110:25	106:22	<b>registry</b>	90:3,14	33:10
111:2	121:10	6:20 39:23	118:10	35:11
114:17,21	140:24	43:13	<b>remainder</b>	36:13
139:6	159:5	63:18	33:16	38:21
<b>recommendati</b>	<b>reduced</b>	68:14	<b>remained</b>	40:18
<b>on</b> 4:11	35:17	<b>regulate</b>	121:8	41:2,7
	102:22		<b>remaining</b>	44:13
	<b>reduces</b>			47:11,16,2
				3 53:14
				101:4,9
				103:19,23

104:6	121:1	156:24	96:16	35:2
105:4	124:18	157:25	129:8,10	105:12
117:12	125:23	<b>reports</b> 3:14	135:6	110:10
143:1,23	126:25	4:9 5:11	136:11,15	122:22
144:8,14	131:19	46:12 89:6	139:17	<b>requiring</b>
149:19	<b>renewed</b>	100:8,12,1	148:14	28:6 150:8
154:1	11:16	8 101:1	154:12	<b>residual</b>
162:9,17	23:11,14	102:4	176:25	19:9 109:6
<b>remediation'</b>	32:21	103:16	177:10	<b>resistant</b>
<b>s</b> 158:20	122:20	116:20	179:1	25:22
<b>remember</b>	125:2,4	129:3	<b>require</b>	<b>resolution</b>
38:21	126:17	133:19	12:21 24:4	93:24
108:18	127:2,5	137:7	27:5 29:1	<b>resolve</b>
<b>remind</b>	<b>repair</b>	146:13	31:8 56:8	7:19,21
6:12,16	74:16,23	150:8,12,1	59:11 70:1	<b>Resources</b>
135:3	<b>repairs</b>	3,16	106:21	10:13
<b>reminder</b>	31:20	152:21	159:13	136:2
7:22	74:22	153:12,18,	<b>required</b>	<b>respect</b>
<b>reminding</b>	<b>repeat</b> 38:12	22 154:19	31:5 32:5	117:23
123:15	118:18	161:4	35:6 43:21	<b>respectful</b>
<b>remote</b> 83:9	137:11	169:16	59:21	110:20
127:16	<b>report</b>	170:3	66:13	<b>respond</b> 5:15
<b>removal</b>	34:15,21	<b>request</b>	67:18	31:19,24
26:2,5	35:25 36:6	45:6,19	100:18	164:12
29:12	46:25	46:1 59:4	101:2,17	166:5
55:12 56:8	47:12,21	89:4 90:23	102:17	177:10
78:20	48:1	97:1,9,12	103:1	<b>responding</b>
106:16	48:1	115:6	107:4	36:12
130:6	88:13,24	120:19	113:8,19	108:6
<b>removals</b>	89:1 90:12	134:5	123:3	<b>response</b>
149:20	95:19	137:1,19	129:8	31:14 87:4
<b>remove</b> 51:13	101:7,9	148:19	131:3	108:17
71:8	103:18	153:2,12	152:19	147:5
173:17	104:6,20,2	154:18	177:25	162:11,13,
<b>removed</b>	3 106:5	156:20	<b>requirement</b>	20,21
58:6,8,16	116:10	165:2,21	42:21,24	176:8
107:17	121:24	166:3	112:18	180:19
149:25	141:16	167:8	145:10	<b>responses</b>
<b>removes</b>	146:20	168:11,25	146:19	8:5,9,15
28:25	150:22	169:3,4	158:1	66:9
<b>removing</b>	151:3,7,9	174:13,17	<b>requirements</b>	145:15,25
26:2,3	152:5,17	178:3,8,13	4:22 5:6	148:15
55:18	153:4,8	,17 179:4	24:7 49:8	159:25
119:12	155:11,13	180:15	91:10	179:6
<b>renewal</b> 1:8	157:22	<b>requested</b>	97:17	180:4
6:6 42:15	158:10,13	63:23	113:17	<b>responsibili</b>
65:6,11	159:10,18	120:16	137:25	<b>ty</b> 14:18
66:1 96:11	<b>reported</b>	<b>requesting</b>	139:7	<b>rest</b> 91:25
120:18	157:7	5:14 90:3	147:17	131:15
	171:9	164:11	153:8	
	<b>reporting</b>	166:3	156:24	
	116:18	<b>requests</b> 4:1	160:5	
	133:3	5:1 8:8,10	<b>requires</b>	



179:20	127:6	70:12,24	<b>roads</b>	<b>Royal</b> 14:16
<b>restore</b>	128:14	71:19 72:4	101:13,14	<b>rubbing</b>
29:25	142:11	86:10	130:7	99:15
55:18,20	145:20	106:1	131:22	<b>run</b> 72:22
56:24 59:1	149:1,11	111:14,16	<b>roadway</b>	83:16
<b>restored</b>	156:9	112:10	170:21	140:14
29:17	173:16	113:1,25	<b>robustness</b>	<b>running</b> 23:3
<b>re-</b>	176:1	136:1	73:7	25:12
<b>submission</b>	180:2	162:5	<b>rock</b> 15:21	134:21
3:13	<b>reviewed</b>	163:1	16:2,8	<b>Russell</b> 15:2
100:7,11	6:19 33:8	165:14	17:25	16:25
<b>results</b> 36:9	71:12	168:10	18:10	<hr/>
52:13,21	127:1	176:18	19:25 20:1	<hr/>
82:25	<b>reviewer</b>	179:21,22	21:25 26:9	S
93:14	64:6	181:2	27:21,23	<b>saddle</b> 71:22
103:24	<b>reviewers</b>	<b>rid</b> 5:24	29:3	72:2
141:22	8:4,21	174:5,20	48:19,25	<b>safe</b> 62:22
153:20	63:6 97:5	178:20	49:10,11	83:21
157:21,23	125:1	<b>riprap</b> 103:3	50:21	<b>Salmita</b> 14:5
158:2	126:23	<b>rip-rap</b>	122:2	<b>Salomoh</b> 2:11
159:2	127:6	18:23	172:13	9:21,22
<b>resume</b>	128:11	58:25	<b>role</b> 167:3	<b>sample</b>
127:14	128:11	102:18	168:15	156:2,3
<b>resuming</b>	179:16	103:2	<b>roles</b> 165:10	173:12
77:10	181:9	<b>risk</b> 4:8	168:5	<b>sampling</b>
134:17	<b>reviewing</b>	35:22	<b>room</b>	4:23 5:6
<b>retain</b> 29:13	71:4 87:15	36:17,22	7:12,13,15	35:23
109:11	126:24	38:17	9:15 11:7	91:11
<b>retaining</b>	135:6	41:16	39:21	97:18
28:19	<b>reviews</b>	42:3,8	40:3,6	138:1,17
<b>retention</b>	128:15	43:15	52:4 53:15	139:7
76:7	<b>revise</b>	45:1,3	54:11	156:2
<b>review</b>	34:13,14	46:10	100:5	158:14
8:3,22,23,	104:18	52:18,25	105:21	<b>Sandy</b> 37:16
25 27:11	<b>revised</b>	73:16	113:9	38:1,9
33:19	102:14	80:17	134:22	81:2,21
39:22	104:22	81:12	135:8,9,12	92:18,24
42:10	156:6	94:10	142:14,17	94:7,12
43:25	176:8	121:10,15	161:18	98:12 99:6
62:3,23	<b>revising</b>	137:6	163:3,10	129:25
63:19	121:17	150:14	175:20	170:1,14,1
65:5,8	<b>revisions</b>	158:10	176:16	8,19 171:4
86:6,19	159:2	<b>risks</b> 36:8	<b>roughly</b> 7:7	<b>Sandy's</b> 38:3
87:11	<b>Rick</b> 2:9	53:9 81:7	18:14	<b>sat</b> 69:6
88:24 90:8	10:12	85:5	61:14	117:8
98:6	40:15	141:12,18	68:20	166:22
115:13	41:6,24	<b>road</b> 14:22	112:23	<b>satisfied</b>
120:18	43:19 44:4	23:25	<b>roundtable</b>	45:21 87:4
125:1	67:23	118:15,16	9:13	162:12,21
126:23	68:18	120:20	135:10	
	69:3,10,12	129:23	<b>rows</b> 102:22	
	,13	164:7		

164:2	<b>Scott</b> 2:6	80:10	<b>seepage</b>	119:9,21
<b>saw</b> 80:2	10:5	137:19	79:22	144:8
105:9	44:9,10	<b>secondary</b>	80:1,4,7	<b>serve</b>
<b>scale</b> 82:23	45:4,5	59:10	138:25	178:11,18
<b>scan</b> 52:4	46:21,22	<b>section</b>	<b>seeps</b> 173:9	<b>session</b> 1:5
<b>scarifying</b>	48:2,3	9:3,10	<b>sees</b> 117:12	6:6,11,13
130:7	51:5,6,17,	12:6 63:4	<b>selection</b>	7:18 8:6
<b>scenario</b>	18 52:7,8	78:2	79:2	45:7 96:16
79:12	87:12,13	105:18	<b>semi-</b>	134:25
89:12	89:2,3	106:5,15	<b>recently</b>	139:20
93:11	92:22,23	116:10,19	102:15	177:6
140:22	94:25 95:1	170:15,21	<b>send</b> 137:17	<b>setting</b> 94:3
172:21	98:9,10	<b>sections</b>	165:21	95:15
<b>scenarios</b>	99:4,5	39:4 60:19	169:3	108:2
79:6,7,10,	106:8,9	63:14,24	176:24	146:25
19 80:21	108:15,16	64:12	<b>SENES</b>	148:12
81:5 82:3	110:1,2	65:22	158:12,22	<b>settle</b>
<b>scenes</b>	114:9,10	<b>sediment</b>	172:9,23	82:7,20
5:17,18	115:16,17	40:23	<b>sense</b> 15:13	<b>seven</b> 25:2
163:25	117:22,23	41:20 42:4	36:3 37:19	155:24
164:13,14	118:20	84:7	47:22 52:5	<b>seventeen</b>
166:9,11	122:16,17	133:22	56:25	100:20
167:16	135:20	<b>sediment-</b>	73:24	102:3
<b>schedule</b>	146:7,8	<b>laden</b>	102:13	<b>several</b> 19:6
13:14 77:4	150:18,19	86:24	145:2	80:17
117:4,11	155:3,4	<b>sediments</b>	153:3	<b>severely</b>
126:4	159:11,16	37:6 38:6	<b>sensitive</b>	160:18
129:5	160:9,10	40:20	72:23 74:4	<b>sewage</b>
157:6	175:2	41:1,14,16	81:14	5:3,8,9
161:23	<b>screened</b>	,19 57:25	<b>sent</b> 8:2,12	97:13,21,2
176:10	25:23	<b>sediment's</b>	134:6	2 106:10
<b>scheduled</b>	<b>sea</b> 56:10	37:11	139:17	108:18,19
8:11,19	<b>Seabridge</b>	<b>seeing</b> 21:12	<b>separate</b>	110:4,7,12
77:5	129:20,21	129:4	16:4 35:16	,18
179:9,12	130:1,20	159:3	168:5	112:13,24
181:6	131:6,14	<b>seem</b> 40:21	<b>separated</b>	114:14,19
<b>scheduling</b>	<b>season</b> 82:12	<b>seemed</b> 65:7	19:13	115:19,25
118:1	83:9	180:8	<b>separates</b>	116:7
<b>scheme</b>	109:8,11	<b>seems</b> 57:2	71:22 72:2	138:5
110:22	117:18	95:7	<b>separation</b>	139:5,9
<b>scope</b>	118:15	113:4,9,22	19:14	175:4,14
40:18,25	119:5,7	115:18	165:10	<b>shaded</b> 58:12
41:2	151:4	127:2	<b>September</b>	75:4,11
51:14,23	152:5	169:16	51:25	<b>Shannon</b> 2:5
104:10	160:3,11,1	170:4	160:15	10:2,4
146:25	4	<b>seen</b> 20:24	<b>sequencing</b>	135:17
148:6	<b>seasons</b>	63:14	44:24	169:11
<b>scope's</b>	92:10	69:15,17	117:14	171:1,17,2
104:14	<b>seat</b> 10:15	70:2 108:9		1
	<b>second</b> 14:3			
	60:13			
	68:12			

173:24,25	<b>shut</b> 37:8	29:6,14,20	<b>size</b> 103:4	145:6,7
<b>shape</b> 36:2	<b>sic</b> 99:9	30:15 32:3	<b>slated</b> 24:24	147:11
<b>shared</b>	109:13	33:9 35:24	<b>Slave</b> 135:14	148:12
129:19	<b>sign</b> 6:16	36:8,15	176:21	149:15,23
131:16	7:16 169:1	37:18	<b>sli</b> 82:15	158:24
<b>shed</b> 122:7	<b>signed</b>	42:20	<b>slide</b> 26:13	159:7,8
<b>sheet</b>	166:24	47:22	45:14	169:15,21
7:14,16	<b>significant</b>	48:12,19,2	59:11	170:4
<b>shelf</b> 148:10	73:8	5 49:12	60:16 68:9	171:2,5
<b>she's</b> 40:9	<b>significantl</b>	52:17	79:6 82:16	172:1,3,19
<b>shift</b> 116:6	<b>y</b> 87:3	53:11	100:15,16	178:11,13,
<b>Shiga</b> 2:18	106:21	55:1,14	102:25	14,19
135:13	<b>sign-off</b>	57:5 62:6	<b>slides</b> 55:9	<b>SNPs</b> 76:12
176:20	178:7	63:3 64:24	78:9 80:3	174:3
<b>Shin</b> 2:18	<b>signs</b> 6:23	65:2 67:13	114:3	<b>SOE</b> 157:1
135:13	15:23	73:18 75:3	<b>slightly</b>	<b>soil</b> 16:2
176:20	135:3	76:16	34:20	19:24 20:5
<b>shore</b> 20:6	<b>sign-up</b>	81:23,24	47:24 97:2	27:23
35:4	7:14,16	127:16,19	<b>slope</b> 63:3	<b>soils</b> 16:8
<b>short</b> 37:16	<b>similar</b> 83:5	129:18,24	73:23	162:18
48:17 89:5	86:16	130:11	<b>slopes</b> 58:20	<b>Somers</b> 2:13
100:9,14	157:20	131:16	<b>slowly</b> 6:16	10:14
116:19	158:8	140:18	135:3	11:21
<b>shortening</b>	<b>simple</b>	141:18	<b>slump</b> 32:9	12:12
176:3	153:12	142:3	<b>slurry</b> 17:4	39:14 41:4
<b>shorter</b> 83:9	173:19	143:8,10	<b>small</b> 31:18	42:18,19
<b>shortly</b> 79:7	<b>simply</b> 24:20	152:3	60:3 107:6	45:10,11
118:13	59:23 82:8	163:20	108:4	47:7 53:5
<b>shortness</b>	107:4	164:9	110:21	55:6 68:25
160:17	123:23	<b>sites</b> 33:23	113:4	69:1,4,11
<b>short-term</b>	153:3	78:20	115:8,11	73:11,12
24:12	159:2	<b>site's</b> 36:12	133:8	75:7,8
36:24 48:9	<b>sit</b> 96:19	<b>sits</b> 56:12	<b>snacks</b> 7:6	77:23 88:8
85:5	132:9	<b>sitting</b>	77:6	91:22,23
<b>showed</b> 14:24	<b>site</b> 12:22	10:15	161:24	92:25
15:5 20:25	14:18,20	18:24	<b>SNP</b> 4:15	93:1,15
62:21	15:21	25:17	31:11	94:14
<b>showing</b>	16:2,13,17	58:14 69:7	33:3,6	99:8,14,16
15:14	17:20	75:13	34:6,10,12	100:13,14
60:17 79:6	18:21	<b>situation</b>	,14,20	109:12,15
123:10	19:5,7,9,1	68:23 71:6	49:19	119:24
<b>shown</b> 20:21	5	113:12	76:13	121:21
61:23 63:2	20:7,10,23	130:14	90:24	122:21
122:13	22:21	<b>situations</b>	94:20 95:3	123:14
<b>shows</b> 58:13	23:20	16:3,4	104:7	124:8
	24:13,17,1	<b>six</b> 33:13	114:15,18	125:19
	8	79:18	137:20	136:3
	26:18,19,2	108:23	138:18	140:4
	4 27:23	109:19	141:6	143:3
		<b>sixth</b> 174:13		144:1
		178:9		147:9,10
				149:12,13
				158:17

166:19	171:17	172:22	<b>staff</b> 2:3	<b>starting</b>
170:6	172:25	<b>specifically</b>	10:1,3,6,1	9:14
171:11,12	173:9	129:20	1 44:8	135:10
172:6	174:3	178:5	54:3	<b>starts</b> 32:9
174:8,9	181:11	180:16	72:8,9,11	<b>state</b> 6:14
175:12	<b>sound</b> 11:5	<b>specificatio</b>	86:8 87:10	16:22
177:3	30:19	<b>ns</b> 74:18	105:19,20,	20:14 27:1
<b>somewhere</b>	<b>sounded</b>	118:10,11	22	32:4,25
32:10	164:1	<b>specifics</b>	106:7,17	46:24
76:13	166:23	39:3 89:1	108:10	48:13
170:4	<b>sounds</b> 98:3	125:11	120:23	49:22 63:3
<b>sorry</b> 10:25	111:14	<b>spill</b> 61:11	135:16,19,	135:2
15:11	115:17	83:23	21,23,25	<b>stated</b>
22:13	129:14	<b>spilled</b>	136:14	110:25
32:23 38:2	134:20	20:12	139:5	<b>statement</b>
39:20	138:23	57:21	142:12,13,	157:22
44:21 52:6	152:15	<b>spillway</b>	19 151:15	171:25
61:18	174:9,10	72:24	155:2	<b>statements</b>
64:17,18	<b>sour</b> 78:15	<b>spillways</b>	156:8,10	181:21
65:11	<b>source</b> 114:7	74:5	163:6,11	<b>stating</b> 5:15
68:10	170:16	<b>spoke</b> 48:13	175:19,22,	164:12
89:17	<b>sources</b>	68:5 80:14	25	166:6
92:25	62:9,17	86:18	<b>stage</b> 69:24	<b>station</b> 5:5
95:13	107:17,24	162:10,19	70:21	94:15,20
99:13	<b>south</b> 17:7	<b>spoken</b> 27:13	157:8	97:16
111:12	56:3	<b>spot</b> 57:14	181:23	99:6,7,9
116:2	<b>southeast</b>	69:7	<b>stages</b> 55:24	139:6
118:17	57:8	<b>spots</b> 79:25	96:10	169:21
132:19	<b>speak</b> 43:20	<b>stab</b> 161:6	117:3	<b>stations</b>
144:2	135:3	<b>stability</b>	<b>staked</b> 13:25	4:16 5:23
149:12	136:9	62:5 90:5	<b>stamped</b>	49:19 91:1
150:10	<b>speaking</b>	121:12	123:5	94:21
158:14	12:4 19:17	158:4	<b>stand</b> 181:17	137:21
170:18	45:11	<b>stabilizatio</b>	<b>standard</b>	138:17,19,
171:21	67:15	<b>n</b> 19:5	131:23	20,24,25
178:16	135:1	26:24	<b>standards</b>	141:6,19
179:23	153:16	30:11	37:3	145:7
<b>sort</b> 20:12	157:17	<b>stabilized</b>	<b>start</b>	151:5
27:16	170:19	58:21	24:20,24	154:2
66:14 70:6	180:7	140:19	40:5 41:18	159:4
93:9 113:8	<b>species</b>	143:15	59:25	171:3
114:20	80:17	<b>stable</b> 24:18	106:9	173:3
118:2	81:8,14	27:1	109:10	174:4,18
132:25	<b>specific</b>	30:13,19,2	135:5,11	178:10,11,
133:9	76:23 82:1	5 115:7	<b>started</b> 6:4	13,14,18,2
136:24	95:19 98:8	140:19	15:8 16:20	1
138:10	101:12,13	143:8,13	34:6 77:18	<b>station's</b>
145:11	116:24	<b>stabilized</b>	78:21	173:11
146:24	123:20	58:21	125:14	<b>status</b>
149:25	156:25	140:19	128:15	34:15,21
159:13		143:8,13	134:20	
167:15,20				
168:3				
169:13				

36:6 46:24	<b>stripping</b>	101:1,3,21	76:21	67:8,14,25
47:11,25	49:2	,23	127:17	75:16,22
91:21 93:8	<b>strongly</b>	104:7,21,2	142:15	95:25
100:23	130:19	2 120:11	150:17	114:17
101:1,7,8	<b>structure</b>	123:22	161:9	123:21
103:17	28:10	124:10	169:5	125:17
104:1,5	30:11	155:5	<b>summary</b> 7:11	132:16
116:21	74:17	<b>submitting</b>	11:14	146:1
141:15	115:10	125:2	162:20	147:11
152:17	122:7	<b>subsequent</b>	<b>summer</b> 35:24	152:12
155:10,12	<b>structures</b>	34:19 39:4	51:16	156:1
159:9	24:16	106:23	76:20 90:1	168:18,24
<b>stay</b> 12:8	30:11	<b>subsequently</b>	119:2,5	169:2
62:19	121:10	42:16	124:3	170:10
<b>staying</b>	<b>studies</b> 5:12	<b>substantial</b>	153:21	171:19
132:18	50:2 76:19	24:8 29:14	<b>summers</b> 24:4	172:8
<b>steady</b>	89:25	<b>substantiall</b>	<b>supplies</b>	<b>surface</b> 51:1
32:4,24	93:17	<b>y</b> 34:3	27:8	122:11
48:12	152:22,25	<b>substantive</b>	<b>support</b>	<b>surprises</b>
49:22	153:4,13	80:21	42:12	30:23
88:23	154:20	<b>successful</b>	72:16	<b>surrounding</b>
<b>step</b> 106:24	156:22	21:3	164:2,5,19	121:20
<b>stick</b> 129:11	<b>stuff</b> 5:12	<b>successfully</b>	165:2	<b>surveillance</b>
<b>stints</b> 14:1	48:6	17:16	168:2	4:16 5:4
<b>stock</b> 89:22	110:18	19:23	<b>supported</b>	90:25
<b>stockpiled</b>	121:3	78:21	5:20	97:15
18:20	124:20	<b>suck</b> 84:5	164:16	137:21
<b>stockpiles</b>	153:13	<b>sufficient</b>	166:16	139:6
18:24	154:21	43:25	<b>supporting</b>	<b>switch</b> 28:22
25:17	<b>subject</b>	103:22	4:19 44:2	34:10
<b>stop</b> 84:1	80:15	<b>suggest</b>	91:5	<b>synopsis</b>
<b>stopped</b>	<b>submerged</b>	43:23	137:23	53:6
138:10	17:6 21:1	94:11	<b>supports</b>	<b>system</b> 8:25
<b>storm</b>	<b>submission</b>	116:17	4:11 46:14	39:22
72:22,23	155:10,13,	131:18	90:14,18	49:20,24
73:2,4,5	18 156:6	159:1	137:8	50:4 51:4
74:12,15	180:10	<b>submit</b>	<b>suppose</b> 39:6	56:4 63:19
121:12	<b>submit</b>	161:23	<b>suppression</b>	86:6
<b>straight</b>	120:19	165:1	28:8	98:6,19
126:20	122:19	<b>suggested</b>	169:24	109:1,6
<b>strategic</b>	123:12	52:21	170:10,15	112:14,19
74:19	126:6,20	<b>suggesting</b>	<b>sure</b> 7:15	142:11
<b>straw</b> 120:15	128:3,6,18	90:18	24:15	175:5,11
<b>strictly</b>	159:15	<b>suggestion</b>	26:25	<hr/>
172:11	<b>submittal</b>	66:24	30:12,22	<hr/>
<b>strike</b> 45:22	131:22	131:9	31:9 40:19	<b>table</b> 3:1
<b>strip</b> 14:21	<b>submitted</b>	151:16	47:7	7:11 8:25
	47:1 50:15	173:16	52:17,19	64:7 86:7
	64:12	<b>suggestions</b>	55:9 60:22	96:15
	100:21,25		65:9	120:25
				129:8

130:25	108:9	177:21	108:5	139:2
162:12,20	116:7,8	179:14	<b>terms</b> 66:7	142:8
163:18	136:24,25	<b>team's</b> 50:7	68:23 95:9	154:5
<b>tag</b> 32:1	<b>talked</b> 80:18	148:1	98:11	162:24
<b>tail</b>	120:22	<b>tech</b> 45:6	110:24	163:1
81:22,23	<b>talking</b> 17:8	<b>technical</b>	124:24	174:15
83:15	27:6 37:19	1:5 6:6,9	133:8,12	175:24
<b>tailings</b>	47:25	8:6 11:1,5	145:6,14	179:13
14:7,14,15	54:4,8	16:6,20	159:12	181:22
,24	78:3	134:25	177:25	<b>thanks</b> 11:20
15:1,6,11	136:21	177:6	180:13	39:19
16:8,9,10	<b>tank</b> 22:1,2	180:21	<b>terribly</b>	41:25
17:4,7,25	<b>target</b> 59:18	<b>technique</b>	13:22	42:17 44:5
18:6,9,10	95:23	80:12	<b>terrifically</b>	47:6 48:3
19:9,13,15	127:11	<b>technology</b>	13:6	50:13 55:3
20:20,25	<b>targeted</b>	80:11	<b>territorial</b>	69:12
21:15	98:7	82:10,22	168:2	70:11,12,2
22:8,12,13	<b>task</b> 155:23	83:5	<b>Territories</b>	5 71:19
,18,22,25	<b>tasks</b> 39:3	115:19	69:16	72:5 86:11
23:5,6	51:22	<b>temperature</b>	70:16	88:9 89:14
26:9 27:21	117:15	119:19	<b>territory</b>	100:3,13
28:9 29:3	119:9	160:17	110:5	112:10
30:10	<b>TCA</b> 20:2,20	<b>temporarily</b>	<b>testing</b> 4:22	113:2,25
49:13 50:1	22:19	28:12 56:9	5:5	115:4
55:12,14	25:22	60:13	50:17,20	118:6
57:12,13,1	26:17	71:2,16	91:10	121:4
7,20 58:13	27:20 29:1	81:12	97:17	128:20
72:19	37:20	<b>temporary</b>	112:20	145:23
78:14	49:16	71:17	113:15,16,	150:19,25
79:23	50:23	<b>ten</b> 98:18	20 137:25	153:15
102:6	57:16	181:6	139:7	157:16
119:12,13	72:15	<b>tender</b> 84:15	<b>thank</b> 6:5	166:1
120:16	74:21	105:3,5,13	9:20 10:25	168:21
122:2,6	79:22	118:9,25	11:13	177:4,14
149:21	102:5	124:1	12:13 39:9	181:1,2
172:13	104:20,23	<b>tendered</b>	40:7,11,14	<b>that'll</b> 59:1
173:5	107:3	147:2	54:14,15	65:23
<b>tailings-</b>	115:9,12	<b>tendering</b>	64:5 66:21	168:12
<b>impacted</b>	117:24	118:2,12	67:19	173:14
17:16 21:6	121:24	125:16	68:16	<b>that's</b> 7:14
29:2 34:2	122:1,6,11	<b>term</b> 36:25	71:18 86:5	11:7 12:16
<b>taking</b> 23:24	123:4	37:16 74:2	87:6 98:8	15:8
43:23	126:1	85:7 94:3	105:16	17:3,5,9,1
121:16	<b>team</b> 44:24	140:2	106:2,5	1,18,20
165:16	115:15	142:3	111:3	18:1,16,22
179:14	116:14	156:3	113:24	19:16
<b>talk</b> 6:14,15	118:8	157:20	118:24	20:11
9:2 13:16	148:8	<b>terminology</b>	131:23	21:12,14,1
26:6 43:5	149:10		132:2	9 22:1,6
67:4 95:18	152:15		134:2,9,10	23:2,24
96:20	155:23		138:22	25:21
103:17				27:3,5
				29:19 30:1
				31:1 36:7

38:22	172:7,16	123:18	11:20	8:13 134:7
40:22 42:9	173:15	125:3	113:23	136:18
43:25	176:24	127:17	172:4	137:18
45:13 47:4	181:3,15	130:24	175:21	179:2,11
48:12	<b>thawed</b>	132:25	181:14	<b>tool</b> 53:2
50:13	119:16	136:8,14	<b>thousand</b>	<b>top</b> 25:22
51:10	<b>themselves</b>	143:9	25:13	26:16
56:11,14,1	29:3	144:17	<b>threw</b> 37:18	50:25
9 57:9,15	<b>theory</b> 25:2	147:16	57:1	61:11
58:5,6,16	62:15	169:25	<b>throughout</b>	88:11
59:13,18,2	<b>there'd</b> 76:6	171:4,22	19:6 45:20	100:22
3	<b>there'll</b>	172:1,11	85:1 90:6	102:7
61:7,13,19	15:13 24:7	173:13	121:18	122:7
64:1 66:18	31:23	175:6,13	131:15	140:7
67:17 68:4	63:21	<b>they'll</b> 7:7	<b>thus</b> 84:12	<b>topic</b> 8:24
70:10	<b>there's</b> 6:24	101:22	127:1	44:10
71:18 75:5	7:14	<b>they're</b> 6:22	<b>tie</b> 159:24	54:16
78:1,2,10	9:1,18	7:1 16:3,4	<b>tight</b> 97:3	76:22
81:8,16	14:21	18:23	119:9	77:18 99:3
82:5	22:10,14	19:18,20	126:18	100:6
83:3,20	23:3,6,21	22:23	131:5	105:22
84:6,8	26:10	28:10	176:4	106:2
85:8,23	28:11,18	30:12	<b>till</b> 73:18	111:13
87:4 88:10	31:16 32:4	36:23	<b>timeline</b>	116:4
90:2	33:23,25	38:15	89:5 96:20	129:2
92:15,16	38:2,23	51:23	97:2 104:5	139:23,25
93:9,17	41:19 44:1	58:17,21	<b>timelines</b>	161:11
98:25	48:19	60:1 63:18	96:2	162:1
100:15	51:22	67:18	124:15,24	163:4
101:10,16,	53:9,10	73:14	125:18	<b>topical</b> 9:9
20 103:13	57:8,18,24	86:23	126:18	<b>topics</b> 8:21
105:13	58:8	105:13	131:23	12:1 40:1
107:19	59:8,9	108:7	<b>timely</b>	132:13
108:22	60:1 63:2	122:4	74:16,24	<b>total</b> 68:1
110:18,19	71:9 73:16	126:24	153:24	100:20
114:5,14	75:13,17,2	128:10	<b>tiny</b> 20:15	<b>totally</b>
115:15	2 79:19	142:11	20:15	14:13
122:12,14	85:21	143:11	<b>today</b> 6:11	165:22
123:3,15	88:21	149:20	7:16	<b>touch</b> 23:23
124:2,14	95:22,23	169:20	8:6,9,13,2	48:5
131:21	98:13	173:8	0 10:15	<b>touched</b>
132:12	99:22	175:7	25:1 40:2	143:4
133:3,5	100:19	180:8	87:5 95:17	144:3
134:2	101:15	<b>they've</b>	132:8	<b>tough</b> 32:1
138:8	102:20	67:16	134:25	<b>towards</b> 50:4
140:20	104:11,14	100:25	136:18	87:16
141:16	105:21	<b>third</b> 18:15	140:10	98:15
142:2	114:13	<b>third-party</b>	179:2,11	116:14
144:12,13	117:16	129:19	<b>toe</b> 70:19	<b>toxic</b> 106:22
147:14	119:21	<b>thirty-five</b>	<b>tomorrow</b>	
150:25	121:25	70:5		
152:11	122:1	<b>thoughts</b>		
161:1				
165:23				
167:20				

<b>train</b> 118:17	115:19	146:1	18:22	112:7
<b>Transcript</b>	119:10	157:11	24:22	143:5
3:21	137:2,4	165:5	25:4,19	<b>understandin</b>
<b>transcripts</b>	138:6,10	<b>trying</b> 59:19	27:22	<b>g</b> 9:18
6:18 87:15	139:10	68:22	28:4,20,25	33:14,15
<b>transition</b>	172:14	89:24	29:9 31:21	42:20
27:15	175:5,14	113:3	74:8 89:8	71:4,11
117:20	<b>treatment's</b>	145:12	103:3	89:24
143:2,24	62:10,14	146:9	121:17	112:2
146:2	<b>trends</b> 88:18	147:7	140:8,9	151:4
<b>travel</b> 176:6	90:8	151:8	155:18,22	165:23
<b>treat</b> 16:7	141:23	167:7	156:12	167:9
17:21	157:23	<b>tube</b>	172:21	<b>undertaken</b>
27:21,22	<b>trigger</b>	60:19,24,2	<b>types</b> 130:15	112:19
29:8 78:13	27:22	5	<b>typical</b> 89:8	<b>undertaking</b>
82:16	28:4,20	<b>Tundra</b> 1:8	<b>typically</b>	111:19
83:18,20,2	29:10,15	6:5 10:17	57:16	165:21,25
4 84:10	138:16	12:22	<b>Tyree</b> 2:7	<b>unfairly</b>
144:20	140:16	13:3,6	10:10	130:10
<b>treated</b>	146:2	14:4,12	54:20	<b>unl</b> 109:20
17:14,17	147:14	40:25 41:7	72:10 74:9	<b>unless</b> 102:1
19:24	159:18	55:24 62:5	76:9	<b>unlikely</b>
20:1,9	177:24	83:4 155:6	91:15,16	19:3 25:24
34:2 78:22	<b>triggers</b>	160:13	111:6	30:19 34:5
80:19 81:4	3:18 4:24	<b>turn</b> 9:12	116:3,5	38:7,10
<b>treating</b>	5:7,24	10:20 11:8	117:5,10	75:12
25:10	27:24	45:5 64:9	135:24	92:4,13
85:20	28:25	77:19 86:9	142:23,24	109:20,23
<b>treatment</b>	91:13	87:9 100:8	143:21	114:6
4:5 5:9	97:20	105:20		
16:11	104:15	106:7	U	<b>upcoming</b>
21:4,10	138:2,14	116:3	<b>ultimate</b>	5:13 96:12
25:9	139:8,23	136:10	29:19	116:20
28:1,14,17	140:3	139:24	<b>ultimately</b>	118:14
29:2,11	142:25	142:13,18	32:3 56:5	147:2
34:5 37:21	145:16,17	163:10	78:2	153:14
44:14,16	146:15	<b>turned</b> 91:20	104:10,17	154:22
45:12 46:6	148:4	<b>turns</b> 152:11	107:2	<b>update</b> 66:21
53:21 62:9	149:22,25	<b>tweak</b> 32:8	115:1	67:17
68:3 69:6	150:3	36:13	<b>umbrella</b>	106:11
78:17 80:6	158:21	45:23	144:22	117:19
81:1 83:16	161:18	<b>tweaked</b>	<b>underground</b>	126:12
84:12,17	174:5,20	122:8	13:25 14:4	158:12
85:8 87:17	<b>trouble</b>	<b>tweaks</b> 23:23	<b>underneath</b>	<b>updated</b>
88:17 90:7	173:11	50:5 53:15	20:1 41:19	43:15
91:19	<b>true</b> 100:25	94:1	119:14	63:15,22,2
97:23	104:1,5	<b>twenty</b> 72:22	<b>understand</b>	3 64:12
106:25	<b>try</b> 7:19	73:3	53:12	66:9 95:24
107:13,14,	127:20	<b>Tye</b> 130:17	86:20	121:24
16	131:6	<b>type</b> 1:8 6:6	111:19	122:13
110:5,16	134:4			123:12
	138:16			



128:9	114:19	103:2	172:13	23
156:6	<b>Valley</b> 1:2	112:13	<b>waste-rock</b>	60:10,24,2
158:14	6:10 9:25	122:3	22:5	5
<b>updates</b>	10:3,6,9,1	171:8	<b>wastewater</b>	61:6,11,14
155:16	1 12:18		106:24	,16
<b>updating</b>	105:19	W	<b>Wat</b> 142:12	62:9,10,14
65:21	134:24	<b>wait</b> 54:7	<b>watch</b> 24:13	63:8,9,13
<b>upfront</b>	135:16,18	123:25	141:24	65:6,16
127:10	142:12	181:17	<b>water</b> 1:3	66:4,25
<b>upload</b> 39:16	163:5	<b>waited</b> 53:17	3:10	67:3
<b>upon</b> 6:1	<b>values</b> 45:2	<b>waiting</b>	4:4,5,14	68:3,24
77:9,10	85:24	52:12	6:10 9:25	69:6,18,24
124:17	<b>vantage</b> 57:3	<b>Walbourne</b>	10:3,6,9,1	,25
126:7	58:11	2:9 10:12	1,13	71:13,21
134:16,17	61:17	40:15	12:17,19,2	75:12,20
182:1	<b>var</b> 157:9	41:24	3 15:11	76:6,15,19
<b>Upper</b>	<b>variable</b>	44:4,5	16:11,22	77:19,22
14:9,23	89:21	67:23	17:6,14,16	78:13,14,1
16:23	<b>various</b>	68:18	,19,21	7 79:13,24
17:11 21:2	74:19	69:3,10,12	19:7	80:25
22:12,15,1	79:5,14,19	,13 70:24	21:1,3,6,8	82:16
6	81:25 82:3	72:4 86:10	,10,13	83:16,18
26:4,6,11	131:15	106:1	22:22	84:7,9,12,
51:8	152:16	111:16	23:4,11,14	16 85:8,20
55:12,15,2	157:9	113:1	24:14,22,2	86:7,24
2 56:8,22	181:9	136:1	5 25:4,9	87:17,20,2
57:12,18	<b>vast</b> 15:10	162:5	26:18	1 88:12,16
58:4,11	18:5	165:14	27:22,24,2	89:9,10
60:14	<b>vegetation</b>	168:10	5	91:19 93:7
61:18,19	30:20	176:18	28:2,7,14	94:16
70:19	<b>velocities</b>	179:22	29:2,5,8,1	95:16
71:23 73:1	75:6	<b>walk</b> 11:22	0,14 31:21	99:11
76:5,7	<b>verify</b> 41:13	<b>walking</b>	32:21	100:2,18
119:13	50:17 51:6	94:22	33:9,11,19	101:9,22
<b>useful</b>	<b>version</b> 79:9	<b>wall</b> 7:2	34:2,5,25	103:23
153:23	92:2	<b>walls</b> 109:4	35:1,16	105:19
177:12	<b>versus</b> 66:8	<b>washrooms</b>	37:8,21	107:17,24
<b>users</b> 129:20	94:11	7:1,3,4	38:17,19	111:24
130:11	<b>visible</b>	<b>wasn't</b> 42:21	40:22	112:3,5,21
<b>usually</b>	15:24	65:19	42:10,14,1	,23 113:5
106:22	<b>visualizatio</b>	104:25	6 43:12	114:6,7
160:14	<b>n</b> 65:3	152:11	45:12	116:18
<b>UV</b> 107:20	<b>volume</b> 28:15	<b>waste</b> 16:2,8	46:4,5,18	119:10
	61:6 70:22	17:25 18:9	47:1,8	121:2
	73:15,16	19:25 20:1	48:16	122:7,20
	83:22,23	21:25 26:9	49:14 50:3	124:12
	<b>volumes</b> 34:3	27:8,21,23	51:1,11,23	125:23
	66:4 76:4	29:3 49:11	53:13,19,2	126:3,8
		50:21	1,22,23	133:1
		122:2	54:4	134:24
			55:19,25	135:16,18
			56:9	136:2
			59:5,7,13,	137:2,3,4,
				10
				138:6,10

140:9,19	<b>we'll</b> 7:5,17	13:20 17:8	153:21	116:21
142:12	10:19	18:14	155:12	120:5,22
143:14	13:14 19:3	21:16 22:8	156:1	121:9
144:19,20	24:20	23:12,15	158:3,5	122:8
145:18	26:2,6,21	24:10	159:3,25	125:6,16
148:2	29:18	25:1,7,12,	161:23	127:3
149:1,2	30:23	17 26:25	162:12,18	128:9,11
150:15	31:4,17,22	27:18	167:7	131:16
152:19	33:1,2	28:16,21,2	177:10	132:25
153:21	34:7,19,24	2 34:3,13	180:3,11	133:6,10,1
155:14,17,	35:12	36:11	<b>west</b> 18:16	1,23
18,22	38:16	37:10	25:16	134:20,21
156:10	39:2,5,20	38:11	103:4,8	135:8
158:9	40:5 43:4	44:10	<b>wetland</b>	136:14,15,
163:5	45:5,7,23,	45:21	57:19	23 144:5
165:19	24 49:19	49:8,24	58:9,19	148:8
166:24	54:6,7	50:25 54:8	60:15	160:13,16
167:4	55:7 75:21	55:1	61:21	164:21
169:15,18,	77:18	57:4,8	110:15	167:24,25
23,25	78:24	59:18 68:4	<b>wetlands</b>	<b>Whale</b>
170:2,8,13	85:2,25	70:21	115:8,11	81:22,23
,19	89:3,24	71:24 73:6	<b>we've</b> 8:22	<b>whatever</b>
171:2,8	90:20	75:12	11:15	89:11
172:14	101:24	77:12	12:1,15	130:25
173:12,14,	105:12	78:7,15	17:14	147:13
16 174:7	115:13	80:3,24	18:5,8,10,	153:8
177:22	128:18	83:13	21 19:23	161:9
180:14	133:17,23	84:18,20,2	20:9 24:17	171:3
<b>waterfowl</b>	134:20	2	27:17,18,1	<b>whatnot</b>
35:5	135:5,11	85:3,11,20	9 28:4,12	107:20
<b>water's</b>	137:15	87:2,3	30:11	125:11
75:19	139:16	89:4,25	32:12	138:25
<b>wave</b> 6:16	140:10,11,	90:2	33:12,13	149:20,22
<b>ways</b> 66:24	15	93:6,17	35:3 39:15	150:9
68:15	141:21,22	94:3,9	42:19	159:5
<b>weaker</b> 79:25	145:21,24,	95:6,25	43:14	<b>what-not</b>
<b>weather</b>	25 147:10	99:15	49:2,17	15:23
160:18	150:12	101:14	52:20 62:3	16:16
<b>we'd</b> 29:13	156:18	107:25	63:1	19:15 22:2
39:1 49:2	157:3	108:1,6,7,	69:15,17	30:12,21
59:16	159:1,7	22 116:1,9	70:9 71:24	35:24
85:24 94:8	161:6	117:11	81:19	57:25
95:24,25	165:24,25	118:11,13	83:11	73:16
117:18	168:24	120:10	84:13,23	75:22,23
126:20	176:24	121:18	85:1,16	<b>whenever</b>
128:2	177:11	123:9	89:19	71:5
156:7	179:1,3	128:7,19	96:13	<b>whether</b>
158:4,9	180:12	129:5	98:4,17	43:5,6
<b>week</b> 58:8	181:8,16	134:22	103:13	94:10
<b>welcome</b>	<b>wells</b> 171:23	137:17	104:24	130:5
180:14	173:14,17	138:9	107:12,15	156:8
	175:14	144:15	109:5,8	178:5,20
	<b>Wendy</b> 182:10	145:12,24	112:18,19	
	<b>we're</b> 11:15	149:24,25		
		151:5		

181:9	161:16	133:10	69:17,18
<b>whichever</b>	163:8	164:20	<b>yet</b> 20:7
113:21	166:20	167:13	30:21
<b>whole</b> 21:18	167:2	<b>working</b>	78:13 89:4
110:14	175:3	19:21	101:11,18
141:22	176:15	20:16	123:22
<b>who's</b> 77:25	<b>Woodworth</b>	51:23	161:25
134:25	182:10	54:23 55:1	<b>you'll</b> 6:23
168:25	<b>worded</b> 157:4	59:25 60:1	17:18
<b>whys</b> 103:21	<b>wording</b>	89:5	33:20
<b>Widely</b> 78:19	45:7,24	110:10	118:3,20
<b>Williston</b>	66:6,25	118:8	139:20
2:15	97:9 131:3	164:22	145:19
9:16,17	136:23	176:2,3	146:12
40:7,8	137:15	<b>workings</b>	155:11,15,
64:14,18	139:19	14:4	16
<b>win/win</b>	169:14	<b>works</b> 23:16	<b>yourself</b>
153:1	<b>wordy</b> 55:9	32:5	11:2
<b>window</b> 48:17	<b>work</b> 6:15	<b>workshop</b>	<b>you've</b> 17:21
<b>winter</b> 23:25	12:25 19:2	130:25	48:15,23
24:5	22:21	<b>worried</b> 83:6	50:14
118:14,16	23:17,21	<b>worry</b> 126:11	70:2,4,8,1
119:5	28:5 35:23	<b>worth</b> 76:18	1 71:9
<b>wise</b> 85:11	45:18	<b>wrap</b> 126:17	83:18,25
<b>wish</b> 123:6	51:7,15,21	<b>write</b> 85:14	98:13
<b>withdrawal</b>	52:23	146:16	120:14
61:15	56:16 59:6	<b>writing</b> 5:15	130:22
<b>withdrawals</b>	60:18 65:1	93:12	153:5
170:19	67:13	164:5,12	155:5
<b>withdrawn</b>	84:17	166:1,5	156:21
170:8	95:18,20,2	<b>written</b> 8:14	
<b>Wonderful</b>	3 96:2	96:13	<hr/>
66:22	101:18	101:2	Z
174:11	104:14	114:12	<b>zero</b> 86:21
<b>wondering</b>	110:22	165:20	<b>zone</b> 85:17
39:10	116:22	169:24	
44:11 47:5	117:6,13,1	179:5	
48:14,22	7	181:11	
50:16	118:4,10,2	<b>wrong</b> 6:7	
52:11 64:9	3 119:4,8	120:13	
87:19	125:12,13,		
96:18	17 126:1	<hr/>	
108:1	131:7	Y	
111:17	136:17,23	<b>year's</b> 47:19	
117:25	147:10	83:21	
129:1	150:21	103:23	
146:12	151:3	<b>yellow</b> 63:24	
159:25	159:18	<b>Yellowknife</b>	
	176:9,23	1:21 13:21	
	179:15		
	<b>worked</b> 20:17		
	78:20		