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<p>5</p> <p>1 EXHIBIT 2 - PowerPoint presentation 30</p> <p>2 for Type "A" water licence application of the</p> <p>3 Resolute Bay utilidor system, Nunavut Water Board</p> <p>4 public hearing, October 27, 2020 (Inuktitut)</p> <p>5 EXHIBIT 3 - Correspondence from Bhabesh Roy to 30</p> <p>6 Richard Dwyer dated August 4, 2020, Re: Seeking</p> <p>7 approval for the renewal of the Type "A" water</p> <p>8 licence of the Resolute Bay utilidor system for 20</p> <p>9 years term (English)</p> <p>10 EXHIBIT 4 - Executive summary of the utilidor 31</p> <p>11 system (water and sewage treatment facilities) of</p> <p>12 the Municipality of Resolute Bay (English)</p> <p>13 EXHIBIT 5 - Executive summary of the utilidor 31</p> <p>14 system (water and sewage treatment facilities) of</p> <p>15 the Municipality of Resolute Bay (Inuktitut)</p> <p>16 EXHIBIT 6 - Hard copy executive summary of the 31</p> <p>17 utilidor system (water and sewage treatment</p> <p>18 facilities) of the Municipality of Resolute Bay</p> <p>19 (French)</p> <p>20 EXHIBIT 7 - Hamlet of Resolute Bay utilidor 96</p> <p>21 renewal application for Water Licence 3AM-RUT---</p> <p>22 (English/Inuktitut)</p> <p>23 EXHIBIT 8 - Summary of Crown-Indigenous and 96</p> <p>24 Northern Affairs Canada review of Water Licence</p> <p>25 Application 3AM-RUT--- (English/French/Inuktitut)</p> <p>26</p>	<p>6</p> <p>1 EXHIBIT 9 - PowerPoint presentation from 113</p> <p>2 Environment and Climate Change Canada to the</p> <p>3 Nunavut Water Board respecting the Resolute Bay</p> <p>4 Type "A" Water Licence Renewal and Amendment</p> <p>5 (English)</p> <p>6 EXHIBIT 10 - PowerPoint presentation from 114</p> <p>7 Environment and Climate Change Canada to the</p> <p>8 Nunavut Water Board respecting the Resolute Bay</p> <p>9 Type "A" Water Licence Renewal and Amendment</p> <p>10 (Inuktitut)</p> <p>11 EXHIBIT 11 - Nunavut Water Board community session184</p> <p>12 presentation regarding a new Type "A" Water</p> <p>13 Licence 3AM-RUT--- Hamlet of Resolute Bay utilidor</p> <p>14 system (English/Inuktitut)</p> <p>15 EXHIBIT 12 - GN-CGS community session PowerPoint 184</p> <p>16 presentation for the Type "A" Water Licence</p> <p>17 application of the Resolute Bay utilidor system</p> <p>18 (English)</p> <p>19 EXHIBIT 13 - Electronic copy of the 184</p> <p>20 Resolute bleed water clarification memo</p> <p>21 dated October 27, 2020 (English)</p> <p>22 EXHIBIT 14 - Electronic copy of email from Daryl 185</p> <p>23 Burke sent October 27, 2020, at 5:29 PM</p> <p>24 to Roy, Bhabesh, Subject: RE: Outstanding Issues</p> <p>25 for RB WLs (English)</p> <p>26</p>
<p>7</p> <p>1 Proceedings taken at Resolute Bay Community Gymnasium,</p> <p>2 Resolute Bay, Nunavut.</p> <p>3 _____</p> <p>4 October 27, 2020</p> <p>5</p> <p>6 NUNAVUT WATER BOARD</p> <p>7 L. Toomasie Chair of Hearing</p> <p>8 R. Mrazek Panel Member</p> <p>9 S. Sowdloapik Panel Member</p> <p>10</p> <p>11 NUNAVUT WATER BOARD STAFF</p> <p>12 K. Kharatyan Director of Technical Services</p> <p>13 S. Autut Executive Director</p> <p>14 S. Kuflevskiy Technical Advisor</p> <p>15 R. Ikkutisluik Licensing Administrator</p> <p>16 T. Meadows Legal Counsel to the Board</p> <p>17</p> <p>18 INTERVENERS</p> <p>19 Government of Nunavut, Community and Government</p> <p>20 Services</p> <p>21 B. Roy (Remotely) Municipal Planning Engineer</p> <p>22 J. Idlout Municipal Technical Officer</p> <p>23 E. Bell Senior Engineer of EXP</p> <p>24 S. Piercey CAO of the Municipality of</p> <p>25 Resolute Bay</p> <p>26 T. Whalen (Remotely) Senior Engineer, EXP</p>	<p>8</p> <p>1 D. Burke (Remotely) Senior Engineer, EXP</p> <p>2</p> <p>3 Crown-Indigenous Relations and Northern Affairs Canada</p> <p>4 G. Okonkwo Manager Water Resources</p> <p>5 S. Forte Water Management Specialist</p> <p>6</p> <p>7 Environment and Climate Change Canada</p> <p>8 A. Graham (Remotely) Environmental Assessment</p> <p>9 Coordinator</p> <p>10 M. Tobin (Remotely) Water Quality Expert</p> <p>11</p> <p>12 INTERPRETERS/TRANSLATORS</p> <p>13 T. Qitsualik Language Translator</p> <p>14</p> <p>15 S. Anderson, CSR(A) Official Court Reporter</p> <p>16</p> <p>17 R. Dempster Sound Technician</p> <p>18 _____</p> <p>19 (PROCEEDINGS COMMENCED AT 9:20 AM)</p> <p>20 Opening remarks</p> <p>21 THE CHAIR: Thank you. Good morning. And</p> <p>22 we're now start -- proceed to the public hearing here</p> <p>23 in Resolute Bay. Welcome to our public hearing for</p> <p>24 Type "A" water licence application submitted by</p> <p>25 Government of Nunavut, Community and Government Service</p> <p>26 Department (GN-CGS). This application is seeking</p>

<p style="text-align: right;">9</p> <p>1 authorization to renew and amend [sic] the expired 2 Type "B" Water Licence No. 3BM-RUT1520 with a Type "A" 3 Water Licence No. 3AM-RUT---. 4 My name is Lootie Toomasie, and I'm the chairman 5 of the Nunavut Water Board and the hearing chair for 6 today's public hearing. Over the next two days, the 7 Nunavut Water Board will be considering the GN-CGS 8 application to authorize activities associated with 9 continued use of water and disposal of sewage through 10 the utilidor system at the hamlet of Resolute Bay. The 11 Applicant initially requested a licence term of 12 10 years until 2030 but later updated it to 20 years to 13 address the recommendation received from CIRNAC during 14 the technical meeting. 15 I would like to also note that some parties are 16 joining the public hearing via Zoom conference call, so 17 I would like to ask those participants who are calling 18 in to mute your microphone to avoid any unnecessary 19 noises. 20 Before we proceed with the hearing, please let us 21 begin with a prayer. Let us stand and pray. 22 Opening prayer 23 THE CHAIR: On behalf of the Nunavut Water 24 Board, I welcome you to the hamlet of Resolute Bay. 25 Now, to provide you with some background and set the 26 stage for the hearing, the Nunavut Water Board, which I</p>	<p style="text-align: right;">10</p> <p>1 shall refer to as "the Board" or "NWB", is an 2 institution of public government created under 3 Article 13 of the agreement between the Inuit of the 4 Nunavut settlement area and Her Majesty the Queen in 5 Right of Canada, Nunavut Agreement. The NWB is 6 responsible for the use, management, and regulation of 7 freshwater in the Nunavut settlement area. 8 The purpose of this public hearing is to review an 9 application filed by the Government of Nunavut, 10 Community and Government Services Department -- I may 11 refer to them as "GN-CGS" or "the Applicant" -- for a 12 renewal and amendment of the existing Type "B" Water 13 Licence No. 3BM-RUT1250 [sic], which expired March 29, 14 2020, as a Type "A" Water Licence No. 3AM-RUT--- under 15 the Nunavut Waters and Nunavut Surface Rights Tribunal 16 Act to authorize the continued use of water and deposit 17 of sewage through the utilidor system at the hamlet of 18 Resolute Bay. 19 Under Article 13, Section 13.3.6, of the Nunavut 20 Agreement and Section 29 of the Nunavut Waters and 21 Nunavut Surface Rights Tribunal Act, the Board has 22 delegated its power to dispose of all matters related 23 to the processing of the GN-CGS's renewal and amendment 24 application, including the conduct of this public 25 hearing, to a Panel of the Board, which the Board 26 refers to as the "Resolute Bay Panel" or "Panel P21".</p>
<p style="text-align: right;">11</p> <p>1 I will be chairing this Panel, and with me today, 2 as members of the Panel, are the Board members: 3 Ross Mrazek on my left, and to my right, Sakiasie 4 Sowdloapik. Several staff members, who have 5 contributed to the Board's administration and technical 6 services, technical review of the application, are 7 present, along with legal counsel to the Board. I ask 8 them to wave when I say their names: Stephanie Autut, 9 executive director; Karén Kharatyan, director of 10 technical services; Sergey Kuflevskiy, technical 11 advisor; Robin Ikkutisluk, licensing administrator; and 12 Teresa Meadows from Meadow's Law, legal counsel to the 13 Board. 14 In addition, we have two interpreters available 15 for simultaneous interpretation throughout the hearing, 16 Tapitia Qitsualik, who is originally from Gjoa Haven, 17 and Martha's not -- I think she's not here yet, but 18 she'll join us today -- who is from Resolute Bay. 19 For audio support, we have Ryan Dempster from 20 PIDO. If you experience any difficulty with your 21 headsets, Ryan is able to provide assistance. 22 To ensure an accurate record of the proceeding is 23 kept, we have with us a court reporter, Sara Anderson, 24 from Dicta Court Reporting Incorporated. 25 Before I move on to an overview of this 26 application and what to expect today during this public</p>	<p style="text-align: right;">12</p> <p>1 hearing, there are some important housekeeping items 2 for everyone here. First of all, I would like to 3 remind everybody that we are currently in the middle of 4 the global pandemic, so we'll be discussing safety 5 measures on an ongoing basis throughout this meeting. 6 As everyone can appreciate, due to the public health 7 restrictions associated with the COVID-19 pandemic, our 8 proceeding may look different than usual as we have had 9 to modify our normal plans to keep us all safe and in 10 compliance with local health requirements. 11 Today, to provide our health and safety briefing, 12 we have Mavis Manuk. Is she here? She's not here yet, 13 but she'll probably join us. Oh, okay. Legal counsel, 14 Teresa Meadows will take the -- take the floor. 15 Go ahead, Teresa. 16 MS. MEADOWS: Thank you, Mr. Chair. Teresa 17 Meadows, legal counsel for the Nunavut Water Board. 18 So as we all realize, we are in fairly exceptional 19 circumstances as we embark on the public hearing for 20 this application. You will notice that as you come in 21 the door we have a sign-in desk. At that sign-in desk, 22 before anyone can enter the hall, we are taking 23 peoples' temperature, and we are getting them to fill 24 out the health screening questionnaire. Anyone who is 25 presenting symptoms that would be similar to 26 COVID-19 -- so anyone who has a fever, a runny nose, a</p>

<p style="text-align: right;">13</p> <p>1 sore throat -- will be asked not to enter the venue. 2 You will notice that some people, when we can't 3 maintain that distance of 6 feet, are putting masks on 4 so that we can protect each other. We also, at the 5 back table, have hand sanitizer and masks available if 6 anyone did not bring a mask with them but they would 7 like to wear a mask. 8 Once inside the hall here, you'll notice that the 9 chairs have little 'X's underneath them. That is where 10 the chair must be placed so that it maintains that 11 distance. Please don't move your chair around. 12 We also have refreshments on the side wall. We 13 ask that once you're in the venue, you come in through 14 the entrance, and to go to the washrooms or to go to 15 the -- where the snacks are, if you can use the far 16 exit so that we're kind of one-way traffic so that we 17 minimize the amount of time where we're in close 18 proximity. It would be appreciated. 19 The Board has complied with all of the public 20 health orders. We have protocols in place, and the 21 chief public health officer for Nunavut has reviewed 22 the Board's protocols for these meetings and approved 23 the Board's implementation of them. If anyone at any 24 time has concerns about the protocols that are in place 25 or questions about the protocols that are in place, we 26 invite you to see either Stephanie or I, and we can</p>	<p style="text-align: right;">14</p> <p>1 assist you in knowing what measures the Board is taking 2 in more detail. 3 For the people on the Zoom call, because this is 4 the first time that the Board has conducted a meeting 5 in this way, we ask that you identify yourself before 6 you speak. The court reporter cannot always see who is 7 actually speaking on the Zoom call, so it's very 8 important for everyone here to identify themselves 9 before they speak. 10 We also note that we are on a bit of a delay in 11 terms of the video feed and the audio feed to the 12 people who are on the Zoom call. In the interest of 13 both our interpreter, our court reporter, and the 14 people in the room, we ask that you allow some time in 15 between your remarks so that the interpreter can -- can 16 hear what you said and interpret it for the people in 17 the room and so that we're not talking over each other 18 where we're not able to actually understand and hear 19 what anyone on the Zoom call is saying. 20 We very much appreciate everyone being willing to 21 come out and join us today. There are gathering 22 limits -- indoor gathering limits in place in Nunavut, 23 and so the maximum capacity of this building is 24 75 percent of the rated capacity, so we will have 25 people monitoring how many community members are here 26 so that we can make sure that we do not exceed the</p>
<p style="text-align: right;">15</p> <p>1 capacity of the building. 2 And with that, Mr. Chair, those are the, sort of, 3 rundown of the changes to the Board's modification of 4 process to reflect COVID-19. We really appreciate 5 everyone doing their best, being patient and flexible, 6 as we work through some new procedures for the Board. 7 Thank you, Mr. Chair. 8 THE CHAIR: Thank you, Teresa. 9 Additionally, I would like to ask everybody not 10 to -- not to approach Sara Anderson, the court 11 reporter, and Ross Mrazek, the Board member, directly 12 since they travelled here from outside of Nunavut. 13 Instead, please direct your questions to Teresa, and 14 she will relay them to Sara and Ross. 15 Second, I would like to ask, again, those 16 participants who are calling in via Zoom to mute their 17 microphone to avoid any unnecessary noises. I would 18 also like to remind everyone to please turn your cell 19 phones off or put them on silent before you begin -- 20 before we begin. So if you have -- if you have done 21 so, you may -- put your mute -- put it on mute or so -- 22 or turn it off. 23 Additionally, as indicated earlier, there is 24 interpreter -- interpretation available throughout the 25 hearing in English and Inuktitut. Earpieces can be 26 obtained from the table located just by the door as you</p>	<p style="text-align: right;">16</p> <p>1 enter this room. Channel 1 broadcasts English while 2 Channel 2 broadcasts Inuktitut. When you are speaking 3 into the microphone, please make sure you have turned 4 it -- your earpieces off to prevent audio feedback or 5 interference with the speakers. 6 Thirdly, I would like to ask everybody, including 7 the Applicant, interveners, and members of the public, 8 to sign in and leave your contact information on the 9 sheets located at the table by the entrance. 10 Additionally, there are COVID-19 screening 11 questionnaire forms available. Please fill them out 12 too. This information is required by the Department of 13 Health for contact tracing purposes, so we will 14 appreciate your help in making sure this information is 15 provided. 16 Also, the agenda for the public hearing and the 17 community session are available at the back. Please 18 pick one up and follow along with us as we proceed. 19 The washrooms are located at the -- outside the 20 hall by -- by -- by the coffee area on the side. There 21 will be snack and refreshment brought in -- brought in 22 throughout the hearing during breaks, and you are 23 welcome to help yourself throughout the day. Please 24 remember to wash your hands and use hand sanitizer 25 prior to touching the snacks. Also, the snacks will be 26 individually packed, so please try to make -- try to</p>

<p style="text-align: right;">17</p> <p>1 take only the item you are going to consume.</p> <p>2 Finally, to assist both our court reporter and</p> <p>3 interpreters, please wait to have a microphone before</p> <p>4 you speak, then state your name, speak clearly and</p> <p>5 slowly, and avoid the use of abbreviation. We</p> <p>6 appreciate your assistance in making sure your comments</p> <p>7 are recorded and the Board's record of proceeding is</p> <p>8 accurate and complete.</p> <p>9 Is there media? Any present? No. Okay.</p> <p>10 Since the Board cannot comment on pending matters,</p> <p>11 either by confirming or denying accuracy of statements</p> <p>12 by others to the media, the Board would appreciate if</p> <p>13 all parties refrain from making any comment that may</p> <p>14 imply a certain action or decision by the Board.</p> <p>15 Following the close of the record of this public</p> <p>16 hearing, the Board's decision and recommendation with</p> <p>17 respect to the application will be communicated in a</p> <p>18 publicly available decision report. Until that time,</p> <p>19 the Board reminds everyone that the Panel members and</p> <p>20 Board staff will not discuss the substance of the</p> <p>21 hearing or the matters before the Board with any of the</p> <p>22 parties or the media.</p> <p>23 If you have a question regarding the Board and its</p> <p>24 practice or procedures, please speak with the executive</p> <p>25 director, and she will assist you.</p> <p>26 Prior to identifying and introducing all the</p>	<p style="text-align: right;">18</p> <p>1 parties in attendance today, I will proceed -- I will</p> <p>2 provide, sorry -- I will provide a brief description of</p> <p>3 the application that is before the Board. The</p> <p>4 application we'll be discussing today is for renewal</p> <p>5 and amendment of the existing Type "B" Water Licence</p> <p>6 No. 3BM-RUT1250 [sic] as a Type "A" Water Licence</p> <p>7 No. 3AM-RUT--- requested by the Government of Nunavut,</p> <p>8 Community and Government Services Department. The</p> <p>9 scope of the application is generally as follows:</p> <p>10 Replacement of the Type "B" Licence Number 3BM-RUT1520,</p> <p>11 expired as of March 29, 2020, with a new Type "A"</p> <p>12 licence for a term of 20 years; storage and use of up</p> <p>13 to 216,528 cubic metres of freshwater annually; the</p> <p>14 water will be extracted from Char Lake; continued</p> <p>15 management of utilidor system operated by the GN-CGS</p> <p>16 through ATCO.</p> <p>17 Now, I'm going to provide you with a brief</p> <p>18 overview of the procedural history for the application</p> <p>19 that is before the Board, which captures only the major</p> <p>20 procedural steps.</p> <p>21 January 22, 2020: NWB received a renewal,</p> <p>22 amendment application for GN-CGS.</p> <p>23 January 23 to February 28, 2020: NWB conducted an</p> <p>24 internal preliminary review of the application, GN-CGS</p> <p>25 submitted missing documents.</p> <p>26 February 28, 2020: NWB distributed the</p>
<p style="text-align: right;">19</p> <p>1 application for a preliminary technical assessment and</p> <p>2 completeness check with a deadline of March 20, 2020,</p> <p>3 and later extended until March 26, 2020.</p> <p>4 March 20 to 26, 2020: Preliminary review comments</p> <p>5 were received from CIRNAC and ECCC.</p> <p>6 March 27 to April 22, 2020: Preliminary review</p> <p>7 were received -- sorry. I missed -- preliminary</p> <p>8 comments from parties were addressed by the Applicant.</p> <p>9 March 29, 2020: The previous Type "B" water</p> <p>10 licence governing the undertaking expired.</p> <p>11 April 29, 2020: NWB issued correspondence</p> <p>12 requesting that parties conduct full technical review</p> <p>13 of the application by June 12, 2020.</p> <p>14 June 12, 2020: NWB received technical review</p> <p>15 comments from CIRNA and ECCC.</p> <p>16 June 17, 2020: NWB issued correspondence</p> <p>17 requesting that the Applicant respond to interveners'</p> <p>18 comments by June 22, 2020.</p> <p>19 June 29, 2020: NWB reviewed and distributed the</p> <p>20 GN-CGS's response to interveners' comments and</p> <p>21 recommendations.</p> <p>22 June 29, 2020: NWB distributed the draft agenda</p> <p>23 and correspondence to confirm that NWB would hold a</p> <p>24 technical meeting and prehearing conference for the</p> <p>25 file on July 14 and 15, 2020, via teleconference.</p> <p>26 July 14, 2020: NWB hosts the technical meeting</p>	<p style="text-align: right;">20</p> <p>1 and prehearing conference via teleconference and</p> <p>2 completed the both -- completed the -- both TM and PHC</p> <p>3 in a single day.</p> <p>4 July 27, 2020: NWB issued a prehearing conference</p> <p>5 decision in respect of the application, providing a</p> <p>6 list of commitments, timelines for the submission of</p> <p>7 additional documentation, a list of issues to be</p> <p>8 considered at this public hearing, and a tentative</p> <p>9 timeline for this in-person public hearing and</p> <p>10 community session; and ...</p> <p>11 August 21, 2020: NWB issued formal notice of this</p> <p>12 public hearing as required under the Nunavut Waters and</p> <p>13 Nunavut Surface Rights Tribunal Act.</p> <p>14 October 8, 2020: NWB issued a public hearing</p> <p>15 update correspondence with draft agenda for this public</p> <p>16 hearing and community session.</p> <p>17 October 20, 2020: NWB distributed the final</p> <p>18 agenda for this public hearing and community session.</p> <p>19 Complete details on all submissions received in</p> <p>20 relation to the application and key procedural steps</p> <p>21 are available on the NWB's FTP site. If you need any</p> <p>22 assistance finding or reviewing any of the</p> <p>23 documentation files on the site, please check with our</p> <p>24 licensing administrator, Robin Ikkutisluuk, at the</p> <p>25 table, and she will help you get access to the</p> <p>26 document.</p>

<p style="text-align: right;">21</p> <p>1 I will now move on to a list of the issues to be 2 addressed at this hearing as identified during the 3 technical meeting and prehearing conference for this 4 file. 5 The scope of the licence: Amendment to original 6 scope of Licence No. 3BM-RUT1520 to reflect 7 decommissioning at the various facilities (old dump 8 site -- oh, sorry, old pump station, blue building, 9 macerator unit building, old intake line, outfall line) 10 and construction/decommissioning of new wastewater 11 treatment plant, new outfall, collection point and 12 improvement to utilidor, and exclusions of the sewage 13 lagoon at the airport. 14 The terms of licence: 10 years -- 10-year term 15 originally requested but later amended to 20-year term. 16 Compliance: Status of outstanding compliance 17 obligations under Licence No. 3BM-RUT1520, wastewater 18 effluent quality criteria in -- waste facilities. 19 Water supply: Quantity of water requested, water 20 pumping capacity of new pump station, Char Lake as 21 water source and its capacity to handle increased water 22 use. 23 Waste management. 24 Wastewater treatment: New wastewater treatment 25 plant, WWTP; decommissioning of macerator -- 26 macerator -- sorry -- unit building and the outfall</p>	<p style="text-align: right;">22</p> <p>1 pipe. 2 Management plans and reports: Environmental 3 plan -- management plan; spill contingency plan; 4 quality assurance/quality control plan; operation and 5 maintenance (O&M) manual, including updated O&M manual 6 for water supply facility; timing of approval of plans. 7 Monitoring program: Compliance with sampling 8 requirements; modification and required updates to 9 sampling methods, sampling points; bioassay effluent 10 testing; amendments; new requirements. 11 Closure and Reclamation Planning: Decommissioning 12 and reclamation of old pump station, blue building; 13 macerator unit building; and old intake line/outfall 14 line. 15 So now that I have given you the background to the 16 renewal and amendment application we will be discussing 17 throughout this public hearing and community session, 18 I would like to turn to Item 4 on the agenda, the 19 instruction of the Applicant and interveners 20 participating in this public hearing. 21 I will now ask -- I will now ask that the 22 Applicant, GN-CGS, introduce their representative. 23 Go ahead. 24 Roll Call 25 MR. BELL: Thank you very much, 26 Mr. Chairman.</p>
<p style="text-align: right;">23</p> <p>1 My name is Eric Bell, and I'm here with Janise, 2 and we are representing, in the person, CGS. 3 Bhabesh Roy is our lead liaison on this, and he is on 4 the Zoom call, so perhaps now Bhabesh could give us a 5 breakdown of how his team is working. 6 THE CHAIR: Thank you. 7 I will now go to the local associations and 8 representative interveners, intervening parties, to 9 introduce -- okay. Just hold on. 10 Go ahead, Teresa. 11 MS. MEADOWS: Thank you, Mr. Chair. I 12 believe that Mr. Roy is on the -- on the Zoom call and 13 is going to introduce the people that are on the Zoom 14 call for the Government of Nunavut, Community 15 Government Services. 16 Thank you, Mr. Chair. 17 THE CHAIR: Okay. Thank you. Thank you 18 for the reminder. Yeah. I'm not used to this, so I 19 keep forgetting. All right. I already forgot one. 20 Okay. Go ahead. 21 MS. AUTUT: Yeah. Thank you, Mr. Chair. 22 Bhabesh, we're going to stop you. I believe your 23 microphone may be on mute, so if you can make sure that 24 you're unmuted at your end, then we can hear you. We 25 are still unable to hear you. 26 We are still unable to hear you. Stephanie Autut,</p>	<p style="text-align: right;">24</p> <p>1 Nunavut Water Board. 2 MR. DEMPSTER: If you could maybe unplug your 3 headset and change the audio for your microphone. If 4 you go down to the little microphone on the left-hand 5 side, you can pull up the pop-up and change it just to 6 your -- your -- same as system here, your integrated 7 audio. You can also -- as an alternative, you can just 8 dial the phone number on the link in the email and call 9 in. Yeah. If you go to your bottom left-hand side of 10 the Zoom screen ... 11 THE CHAIR: Okay. Give us -- to -- to 12 correct some -- some of the problem here and -- and 13 something -- give us a 15-minute break. 14 MS. AUTUT: So as the Chair has indicated, 15 we are going to take a short break. We do ask anyone 16 that is heading out to the refreshment table to use the 17 proper exit and to maintain a -- 6 foot between each 18 other as you proceed down the refreshment table. 19 Thank you. 20 (ADJOURNMENT) 21 MR. ROY: So we can start now? 22 MR. DEMPSTER: Correct. 23 MR. ROY: Okay. 24 Thank you, Mr. Chairman, to give us the 25 opportunity for -- to attend this meeting. My name is 26 Bhagesh Roy. I'm the GN representative and licensee</p>

<p style="text-align: right;">25</p> <p>1 and main contract of this file. In my team, I am being 2 assisted by Janis Idlout, who is our municipal 3 technical officer in my office. I have a big team in 4 this meeting. 5 Some are physically attending; some are partially. 6 Physically attended, Steve Piercey, who is the CEO of 7 the Municipality of Resolute Bay. Municipality is also 8 part of this included operation. He is also part of my 9 team. 10 Also, Eric Bell, who is the senior engineer of 11 EXP, who is physically in this meeting, who is 12 assisting me for this entire meeting. 13 Beside that, I have Tony Whalen, who is the senior 14 engineer of EXP, who is remotely attending this call. 15 Also, Daryl Burke, who is also senior engineer, 16 remotely attending to support the -- my licence -- 17 licence application process. 18 Now, these are the team members: two from sole GN 19 office; one from municipality, CAO; and three from EXP. 20 Mr. Chairman, I just want to let you know that our 21 IT -- GN IT told me that Zoom is not friendly to the GN 22 IT system. So it means -- I'm outside of the GN 23 network; that's why I'm getting to the system. But if 24 I was in the GN network, I could not -- into the Zoom 25 system. Just let you know in future meetings. 26 Thank you, Mr. Chairman. So these are the parties</p>	<p style="text-align: right;">26</p> <p>1 working together with me to support the licensing 2 process and the meeting today and tomorrow. Thank you. 3 THE CHAIR: Thank you. 4 Now we'll proceed with the interveners and local 5 representative. 6 I'd like to call Crown-Indigenous Relations and 7 Northern Affairs, who is here in person and will be 8 providing a formal presentation. Please have your -- 9 have your introduction. 10 MR. OKONKWO: Hello. Thank you, Mr. Chair. 11 My name is Godwin Okonkwo. I'm the manager water 12 resources with Crown-Indigenous Relations and Northern 13 Affairs Canada. And with me here is Sarah, who's lead 14 of the file, but I'll let her introduce herself. 15 Thank you. 16 MS. FORTE: Hello. My name is Sarah 17 Forte, and I'm water management specialist with 18 Crown-Indigenous Relations and Northern Affairs, and 19 I've been working on this file. 20 THE CHAIR: Thank you. 21 Ryan, you want to address something? 22 Now call the Environment and Climate Change Canada 23 who is joining us over teleconference and will be 24 providing a formal presentation. 25 MS. GRAHAM: Anna Graham, Environment and 26 Climate Change Canada. Can everyone hear me?</p>
<p style="text-align: right;">27</p> <p>1 THE CHAIR: Yeah, we can hear you. 2 MS. GRAHAM: Okay. Thank you. Thank you. 3 I am the environmental assessment coordinator for 4 this project, and with me on Zoom today is Meagan 5 Tobin, our water quality expert on this project. 6 THE CHAIR: Okay. Thank you. 7 Is there any other interveners who would like to 8 speak? Please identify yourself and introduce 9 yourself -- your representative. Okay. I take 10 that ... 11 It is our tradition to give respect to all the 12 elders; therefore, at any time during the proceeding an 13 Elder may speak about the application that is before 14 the Board. I just ask that any Elder wanting to speak 15 about the application wait until the Board staff can 16 get you a microphone so that we can ensure we have a 17 complete record of what you have to say. 18 Are there any members of the general public who 19 would like to identify themselves and make a formal 20 request to speak to the Board about -- during this 21 public hearing? 22 I also want to mention any community member who 23 wish to ask question or provide comments to the Board 24 about this application will also have an opportunity to 25 do so tonight during the community session starting at 26 7 PM.</p>	<p style="text-align: right;">28</p> <p>1 Are there any representative from agencies, 2 association, et cetera, who have not submit 3 intervention but would like to speak? 4 I will now turn to getting identification of any 5 motion or objection to the application that is before 6 the Board. We're not suspecting any motion, but -- 7 okay. Okay. 8 Seeing none, we will now proceed with Item 8 of 9 the agenda, the presentation by the application -- by 10 the Applicant. Sorry. 11 Applicant, go ahead. 12 MR. BELL: Thank you very much, 13 Mr. Chairman. The first part of the presentation will 14 be presented by Mr. Roy. 15 THE CHAIR: Just hold on, Applicant. 16 Sorry. Go ahead. 17 MS. MEADOWS: Thank you, Mr. Chair. 18 Teresa Meadows, legal counsel for the Nunavut 19 Water Board. Mr. Chair, there's a number of procedural 20 matters that I have before the Applicant can make their 21 presentation. 22 First and foremost, I will require that the -- the 23 parties who will be presenting and providing evidence 24 on behalf of the Applicant, I will ask now that they be 25 sworn in or affirmed. So if I can have the witnesses 26 please state and spell their name for the record,</p>

<p style="text-align: right;">29</p> <p>1 please.</p> <p>2 MR. BELL: I will go first. My name is</p> <p>3 Eric Bell, E-R-I-C B-E-L-L.</p> <p>4 MS. IDLOUT: Hi. I'm Janise Idlout,</p> <p>5 J-A-N-I-S-E I-D-L-O-U-T. Thank you.</p> <p>6 MS. MEADOWS: And I believe you have someone</p> <p>7 on the phone as well -- or several people on the phone.</p> <p>8 If I can have those -- or on Zoom. If I can have those</p> <p>9 witnesses please state and spell their name for the</p> <p>10 record, please.</p> <p>11 MR. WHALEN: Yeah. Tony Whalen.</p> <p>12 T-O-N-Y W-H-A-L-E-N.</p> <p>13 MR. BURKE: Also Daryl Burke, D-A-R-Y-L</p> <p>14 B-U-R-K-E.</p> <p>15 MS. AUTUT: Stephanie Autut with the</p> <p>16 Board.</p> <p>17 Bhabesh, I believe you were on mute, but as a</p> <p>18 witness to this application, you will need to identify</p> <p>19 yourself and spell your name, please. Bhabesh, we are</p> <p>20 unable to hear you. If you can unmute your phone,</p> <p>21 please.</p> <p>22 MR. ROY: Bhabesh Roy. B-H-A-B-E-S-H.</p> <p>23 Last name is R-O-Y.</p> <p>24 MS. MEADOWS: Thank you. If I can have the</p> <p>25 witnesses who are on Zoom and on the phone ...</p> <p>26 TONY WHALEN, DARYL BURKE, BHABESH ROY, Affirmed Via</p>	<p style="text-align: right;">30</p> <p>1 Teleconference</p> <p>2 ERIC BELL, Sworn</p> <p>3 JANISE IDLOUT, Affirmed</p> <p>4 MS. MEADOWS: Thank you. Teresa Meadows,</p> <p>5 legal counsel for the Nunavut Water Board.</p> <p>6 Mr. Chair, I have six exhibits which consist of</p> <p>7 the presentation materials about to be presented by the</p> <p>8 Applicant in English and Inuktitut. I also have their</p> <p>9 summary statements that are in several languages, and I</p> <p>10 also have a statement -- a letter that the Applicant</p> <p>11 provided to the Nunavut Water Board, and I propose to</p> <p>12 mark those as the first six exhibits in this public</p> <p>13 hearing.</p> <p>14 And, Mr. Chair, with that, those are all my</p> <p>15 procedural matters. Thank you, Mr. Chair.</p> <p>16 EXHIBIT 1 - PowerPoint presentation</p> <p>17 for Type "A" water licence application of the</p> <p>18 Resolute Bay utilidor system, Nunavut</p> <p>19 Water Board public hearing, October 27, 2020</p> <p>20 (English)</p> <p>21 EXHIBIT 2 - PowerPoint presentation</p> <p>22 for Type "A" water licence application of the</p> <p>23 Resolute Bay utilidor system, Nunavut Water</p> <p>24 Board public hearing, October 27, 2020</p> <p>25 (Inuktitut)</p> <p>26 EXHIBIT 3 - Correspondence from Bhabesh Roy</p>
<p style="text-align: right;">31</p> <p>1 to Richard Dwyer dated August 4, 2020,</p> <p>2 Re: Seeking approval for the renewal of the</p> <p>3 Type "A" water licence of the Resolute Bay</p> <p>4 utilidor system for 20 years term (English)</p> <p>5 EXHIBIT 4 - Executive summary of the utilidor</p> <p>6 system (water and sewage treatment</p> <p>7 facilities) of the Municipality of</p> <p>8 Resolute Bay (English)</p> <p>9 EXHIBIT 5 - Executive summary of the utilidor</p> <p>10 system (water and sewage treatment</p> <p>11 facilities) of the Municipality of</p> <p>12 Resolute Bay (Inuktitut)</p> <p>13 EXHIBIT 6 - Hard copy executive summary of</p> <p>14 the utilidor system (water and sewage</p> <p>15 treatment facilities) of the Municipality of</p> <p>16 Resolute Bay (French)</p> <p>17 THE CHAIR: Thank you, Teresa.</p> <p>18 So, Applicant, you may go ahead.</p> <p>19 Presentation by Government of Nunavut, Community</p> <p>20 Government Services (Type "A" Water Licence)</p> <p>21 MR. ROY: Thank you, Mr. Chair.</p> <p>22 I am going to present for the Type "A" water</p> <p>23 licence application of the Resolute Bay utilidor</p> <p>24 system. This presentation will be shared by myself and</p> <p>25 our senior advised technical advisor, Eric Bell, and to</p> <p>26 answer to the question of the -- provided to you by</p>	<p style="text-align: right;">32</p> <p>1 myself, Eric Bell, Tony, and Daryl.</p> <p>2 So let's go ahead to -- step by step. I'm going</p> <p>3 slowly. My first slide is for the Municipality of</p> <p>4 Resolute Bay. As you know, the Municipality of</p> <p>5 Resolute Bay, it is 1970s settlement located at</p> <p>6 74 degree, 43'01" second north and 94 degree 58'10"</p> <p>7 west. The population -- the community was designed in</p> <p>8 a way at 1970 to accommodate roughly 1,500 people.</p> <p>9 Today, 2020's population is 290. This is the base</p> <p>10 population of the town. Interestingly, the town</p> <p>11 population increased dramatically in summer because</p> <p>12 this is the Canadian military training centre, and the</p> <p>13 military moved to the town for short term, so</p> <p>14 population moved from 290 to roughly 800.</p> <p>15 The entire town divided into two sections. The</p> <p>16 town area is the utilidor system, is the one part where</p> <p>17 it's mostly the public area. 7 kilometres away there</p> <p>18 is another band of the settlement or be -- government</p> <p>19 offices are -- the airport are located, which is almost</p> <p>20 7 kilometre from the town.</p> <p>21 The town is company -- water supplied by the</p> <p>22 utilidor system, and the airport area is water supplied</p> <p>23 by truck system. In this -- in this small town, we</p> <p>24 have three water licence: water licence of the</p> <p>25 utilidor system, 3BM-RUT1012, Type "B". It was issued</p> <p>26 March 30th, 2015. This licence -- or the licence of</p>

<p style="text-align: right;">33</p> <p>1 the solid waste facility, this belonged to the Hamlet. 2 It was issued on March 30, 2020. At the airport 3 facility, there is a sewage lagoon in the airport, it's 4 3BM-YRB1621, Type "B". It was issued December 16, 5 2016. This licence belonged to the GN, the Department 6 of Economic Development and Transportation. So out of 7 the three licence, the utilidor licence belonged to 8 Community Government Services, Government of Nunavut, 9 and sharing with the Municipality of Resolute Bay. 10 How this system is operated: The operational mode 11 of the utilidor system -- Nunavut is original system, 12 and Baffin original headquartered in Pond Inlet. 13 Pond Inlet office, we have the PO office and also the 14 asset management division. Asset management is under 15 the PMO office, and we contacted a local contractor for 16 day-to-day operation who's name is ATCO. 17 Char Lake is the potable water source, and we pump 18 water from Char Lake, and from there, we'll pump the 19 water to the system plant. So the old pump station is 20 not functioning to the satisfaction. We are building a 21 new pump station about 60 feet -- 60-metre area from 22 the existing one. It is under construction right now. 23 We are expecting to build -- build and complete and 24 commission the new one in 2021. It is half -- almost 25 75 percent done. 26 Now, all pump station has a flow meter who is --</p>	<p style="text-align: right;">34</p> <p>1 calculate the water coming from the Char Lake. In the 2 new pump station, also a new flow meter has to go there 3 to model the future water extraction volume. 4 The water treatment plant is located at Signal 5 Hill, which is about 500 metre from the pump station, 6 and there is a storage tank next to the water plant, 7 approximately 500 metre cubed. 8 Now, in the airport area, the water is supplied by 9 the truck. The truck water collected from the water 10 treatment plant. The water distribution system in the 11 town is a circulation system. It's -- the system is 12 controlled from the water treatment plant. So, like -- 13 how the town -- the public individual household in 14 Resolute Bay, they are getting the pipe water supply. 15 Chlorine is the only disinfectant reagent we are 16 using that now in the current water treatment plant. 17 In the future treatment plant, it will be 18 different. I will explain later. 19 The operational mode continues in this chapter. 20 The linear length of the utilidor system is about 21 4 kilometre. This is a network system inside the town. 22 The utilidor system consists of buried water and sewer 23 line. The waterline is 150-millimetre diameter, and 24 sewer line is 200-millimetre diameter. The waterline 25 is a recirculation process under the pressure of 100 26 psi. The estimated of bleeding water is roughly</p>
<p style="text-align: right;">35</p> <p>1 227 litres per day. The utilidor system consists of 2 36 access vault and 23 fire hydrants. There is a water 3 meter at each building to record water consumption, and 4 it's billed to the Hamlet on monthly basis. 5 The sewer line passes through the macerator unit 6 where suspended solids are classed to make it smaller 7 to discharge to the sea. 8 A new wastewater treatment plant is proposed to be 9 built next to the macerator unit. The macerator unit 10 will be decommissioned once the new wastewater 11 treatment is built. 12 The future wastewater treatment plant will receive 13 the truck sewage coming from the airport, and once the 14 system will be operational, the airport sewage lagoon 15 will be decommissioned. 16 The new wastewater treatment plant effluent 17 recommended by ECCC, CBOD, and TSS, 25 milligram per 18 litre both cases. 19 The utilidor system -- different section have been 20 updated at the current time. The new utilidor system 21 acquired the waterline, sewer line, head pump, fire 22 hydrant, all have been updated, and to be operational 23 is available for the audience and to the contact to 24 operate the system. 25 Here, this status of the water licence: The 26 existing water licence, 3BM-RUT1012, this licensee is</p>	<p style="text-align: right;">36</p> <p>1 Community Government Services of Government of Nunavut. 2 It is Type "B" issued March 30, 2015, expired March 29, 3 2020. It was a five years' licence. The water permit 4 of this particular licence is 126,020 cubic metres 5 annually. 6 Now, status of the future licence, part -- 7 Mr. Chair already explained. The proposed licence is 8 3AM-RUT dash -- we are waiting for the number. The 9 licensee the same, Community Government Services of 10 Government of Nunavut. It will be Type "A" licence. 11 The proposed duration is 20 years, and these 20 years 12 will be ending on 2040. 13 We are requesting for the permit of 2040. This 14 Type "A" water licence is 216,528 metre cube. 15 The component of the utilidor system at par, we 16 have 4 kilometre of buried water and sewer lines, 17 23 fire hydrants, 36 access vaults, the pump station at 18 Char Lake. We have 500-metre water storage tank at 19 Signal Hill, a water treatment plant at Signal Hill, a 20 macerator unit, 150-millimetre diameter intake line 21 from Char Lake to pump station, 150-millimetre diameter 22 water intake line to the pump station to Signal Hill, 23 200-millimetre diameter of outfall line from macerator 24 unit to the sea. The original utilidor system was 25 built 1978 and upgraded 2014/15. 26 Here are the main components of the future</p>

<p style="text-align: right;">37</p> <p>1 utilidor system, how -- next one -- next -- from now to 2 next five years, how the utilidor system will be look 3 like. 4 The main buried water and sewer line upgraded in 5 2014/'15, the vaults upgraded in 2014/'15, fire hydrant 6 upgraded in 2014/'15. And intake from the Char Lake to 7 the new pump station, it is already constructed. Fish 8 screen were all -- already provided at the end of 9 intake of the new pump station. The new pump 10 station -- sorry. A new -- new pump station at 11 Signal -- a new water plant at Signal Hill is under 12 construction. A standard flow meter will be installed 13 at the new pump station to -- it will be done in -- 14 next year. Because this year construction already 15 stop. 16 Intake from new pump station to Signal Hill water 17 treatment plant have -- already constructed. The 18 storage tank is already built. We are upgrading the 19 existing water treatment plant in order to meet our 20 current drinking water guidelines. It is under 21 construction. A new wastewater treatment plant, it's 22 under design phase; we did the site selection. A new 23 outfall from the water treatment -- the wastewater 24 treatment plant to the sea, it will be built once the 25 future wastewater treatment plant is built. A 26 collection point at the wastewater treatment plant to</p>	<p style="text-align: right;">38</p> <p>1 receive the trucks with, it will be located once the 2 new wastewater treatment plant in operation. 3 Once all these new utilidor -- new component of 4 the utilidor system are in -- operational, the old pump 5 station, macerator unit, outfall line, and the -- the 6 old wastewater treatment plant, blue building, will be 7 decommissioned. 8 Here is a little sketch I'm presenting to you, how 9 it is today and how it should be tomorrow. We -- we 10 have Char Lake. This is our main source. From 11 Char Lake, the water presently -- the water is coming 12 to the pump station, and pump station will push out the 13 water to the storage tank to the Signal Hill water 14 treatment plant. And from there, it is coming to the 15 main town for distribution. And, also, the sewer line 16 is running parallel to the waterline. 17 And from there, the sewer -- sewer is passing 18 through the macerator unit, and there is a grinding 19 machine inside. It's grinded up, the suspended solid, 20 and running to the sea. So outfall line -- there is a 21 point called "compliance point", while you have to 22 satisfy BOD and TSS level according to the water 23 licence. 24 The outfall is seen when there's a low tide. 25 Outfall is submerged when there is high tide. And, 26 interestingly, the entire sewer system of -- of the</p>
<p style="text-align: right;">39</p> <p>1 town is a gravity system. We don't have any mechanical 2 device to drive the sewer from one point to other 3 point. But in the mechanical system, we are using the 4 bleed water to mix with sewage to dilute and then back 5 to the sea. 6 So later on we'll be talking about the bleed 7 water, its impact on our water supply system. 8 So this is the present system. How the future 9 system will looking -- look like -- the future system 10 is -- Char Lake will be there. The new pump station is 11 going to be built -- is under construction next to the 12 existing pump station. And then, same way, we are 13 connecting the pump station to the same storage tank 14 and then storage tank to the water treatment plant. 15 Water treatment plant, as I said, is going to be highly 16 upgraded to satisfy our present need. And then 17 connected will be the distribution line, the water 18 sewer line. 19 Right now, the water treatment plant is connected 20 with the waterline. So once, basically, the 21 distribution is completed, then sewer line -- the last 22 vault are build. Sewer line is connected also getting 23 the sewage from treatment plant. Now, once it's coming 24 to the town, from the town, it will not go to macerator 25 unit anymore because we are building a wastewater 26 treatment plant, so all the wastewater is coming to the</p>	<p style="text-align: right;">40</p> <p>1 treatment plant. 2 At the same time, we are getting the truck sewage 3 from the airport location and then dumping to the 4 sewage -- sewage plant. So this sewage plant will be 5 receiving sewage from the town from the pipe system, 6 also sewage from the truck, and then will connect and 7 then have to treat to the high degree to satisfy the 8 BOD-TSS level as directed by ECCC, and then we have to 9 flow the water to the sea. 10 In this -- in this case, the compliance point is 11 moved from the sea to the -- next to the water 12 treatment plant. It means once the water from the -- 13 treatment water coming out from the plant, it must 14 satisfy our compliancy. 15 So I just use one slide, and then I hand it over 16 to Eric. 17 The historical water extraction volume: You see, 18 the water extraction volume 2019 down to 2014, and in 19 this period you will see the highest water extraction 20 volume 2015 and then second highest is -- next highest 21 is 2016. Because 2015 to once we are -- we are 22 updating the utilidor system -- prior to that, we have 23 sewage leaking. You can -- we must have lost almost 24 50 percent water leaking out. And then once we built, 25 then we have to do -- we have to do the hydraulic test 26 of the entire pipe to make sure there is no -- there is</p>

<p style="text-align: right;">41</p> <p>1 no leak anywhere. We have to store water and do the 2 hydraulic test. So that also take a lot of water. 3 That's why 2014 and 2015 we have a huge extraction of 4 water from the Char Lake. 5 Now, as I said, the previous permit volume is 6 126,200 [sic] cubic metre, but due to the Water Board's 7 current regulation, we have to move from Type "B" to 8 Type "A", and we are requesting for 20 years' licence, 9 and so definitely 20 years' licence -- the amount I 10 already indicated -- that that was -- volume we are 11 requested in the water permit. 12 So from here, I'm leaving to Eric. The -- EXP is 13 our main consultant who would be the entire replacement 14 of the utilidor system, and, also -- they are also 15 current consultant for the pump station and also the 16 water treatment plant. They also do the site selection 17 study, the simply -- for the wastewater treatment 18 plant. 19 So the most experienced three senior engineers who 20 are involved with me for design and construction, 21 renovation, and supporting all the necessary documents 22 for the water licence application. All three are 23 present. So Eric is on -- in the room, so I'm leaving 24 to Eric to continue to present up to the end. 25 Eric. 26 MR. BELL: Thank you very much, Mr. Roy.</p>	<p style="text-align: right;">42</p> <p>1 Moving on this slide right here, again, EXP has 2 compiled a lot of these numbers on best practices and 3 on historical data for the CGS group. The design flow 4 for the water source at the new pump station in 5 Char Lake is by -- 6 THE CHAIR: Stop. Hold on. Hold on. The 7 interpreter needs some -- slow down. Sorry. She 8 can ... 9 MR. BELL: Thank you very much, 10 Mr. Chairman. I'm a little excited. 11 The design flow for the water source from the new 12 pump station is 720 litres a minute. There will be 13 three pumps installed with two in operation at any time 14 for a capacity of each having 360 litres a minute. 15 There's also a fish screen, as per DFO 16 regulations, that has 2.3-millimetre wedge wire 17 protecting the aquatic life. 18 The maximum output from Char Lake pump station is 19 900 litres per minute with all pumps in operation. 20 And, again, the gravity sewage flow rate from the 21 macerator unit to the ocean is currently estimated at 22 280 litres a minute. 23 If I could go to the next slide, please. 24 So we are aware of revised turbidity ruling as of 25 May 13th, 2020, and the treatment design for the plant 26 takes this into account. With filtration, normal</p>
<p style="text-align: right;">43</p> <p>1 operation will occur as long as the water turbidity 2 remains less than or equal to 1 NTU. 3 With dual filtration at the water treatment plant, 4 which includes one stage of multimedia filters which 5 are the large filters that remove large particles of 6 turbidity, as well as giardia microorganisms -- the 7 second stage of filtration is a 1-micron filter -- so 8 it's much smaller -- which will remove smaller 9 particles, as well as cryptosporidium microbio. There 10 should be no issues with meeting the turbidity limits 11 so long as these filters are in operation. 12 The 3-log, 99.9 percent inactivation of pathogens, 13 is achieved with 2-log credits from filtration and an 14 additional log credit for the addition of chlorine. 15 Next slide, please. 16 So on to the quantity of water that has been 17 requested. The annual water extraction from Char Lake 18 has been calculated and forecasted from this current 19 year all the way to 2047. Included in this table are 20 an estimated growth in the population, an estimate in 21 the litres per person per day that a person in 22 Resolute Bay would consume, and then the overall 23 community consumption. There's also the airport 24 consumption for a total estimate of how much water is 25 currently being utilized and how much will be in demand 26 in 2047. That number goes from 103,000 litres per</p>	<p style="text-align: right;">44</p> <p>1 day -- or a thousand -- litres per day, yes -- to 2 upwards to 141,000 litres a day. 3 Both of these numbers have max-day factors applied 4 to them, okay, whether it's reflected in 2 units of 5 flow, being litres per day or litres per second, and 6 this accounts for the instantaneous time when everybody 7 wants to use water at once. 8 Also added in this chart is the bleed water rate, 9 and that has to do with the amount of water that comes 10 from the freshwater system to be added to the sewer 11 system to keep that alive. And the litres per day on 12 the bleed water has been modified over the forecasted 13 timeline, up to 2047, based on forecasted age and 14 forecasted number of users. 15 So the total annual consumption in metres cubed in 16 2020 is estimated to be 160,000 cubic metres; and then 17 2040, at the end of our request for permit, it's 18 216,000 cubic metres; and by 2047, it is estimated to 19 be 236,000 cubic metres. 20 Next slide. 21 The total extracted water accounts for use within 22 the community, the airport community, as well as the 23 bleed water. Annual consumption for 2020 is calculated 24 at sixteen -- 160,000 up to 236,000 in 2047. Again, 25 this has to do with the population increases; the user 26 habits, being the per-capita consumption; and the</p>

<p style="text-align: right;">45</p> <p>1 increase in the estimates for bleed water.</p> <p>2 The Char Lake replacement capacity is estimated to</p> <p>3 be sufficient up to about 2040 to supply water for the</p> <p>4 community. It is recommended that additional</p> <p>5 technologies be investigated, heat tracing, additional</p> <p>6 pumping, to replace bleed water systems and to prevent</p> <p>7 water from freezing since Char Lake cannot sustain</p> <p>8 supply in this fashion past 2040.</p> <p>9 Next slide, please.</p> <p>10 CGS is requesting a water measurement confirmation</p> <p>11 for Char Lake. For this purpose, the measuring of</p> <p>12 water quality is being withdrawn on a consistent basis</p> <p>13 from Char Lake, and a flow totalizing flow meter is</p> <p>14 the -- is the desired technology. Everything on this</p> <p>15 slide that is being presented has to do with a</p> <p>16 temporary flow measurement request that CGS has in</p> <p>17 order to confirm the measurement. Once the ultimate</p> <p>18 Signal Hill water treatment plant has been upgraded,</p> <p>19 this will -- there will be adequate flow measurement</p> <p>20 incorporated into that.</p> <p>21 But in the short-term, the service conditions -- a</p> <p>22 turbine flow meter is what we would like to use. The</p> <p>23 service conditions and the congestion that exists at</p> <p>24 the Char Lake pump house is provided -- tough to put a</p> <p>25 flow totalizer at Char Lake. Ideally, you would have a</p> <p>26 nice piece of a pipe where you could just insert the</p>	<p style="text-align: right;">46</p> <p>1 flow meter, and, in our case, the flow meter is</p> <p>2 .58 metres long.</p> <p>3 If anyone has been down to Char Lake, there is not</p> <p>4 very much piping down there, and it's not very long.</p> <p>5 So we are proposing to install this at the</p> <p>6 Signal Hill plant directly on the intake as the line</p> <p>7 comes to Char Lake into the Signal Hill plant. So that</p> <p>8 is an equal measurement of what leaves Char Lake.</p> <p>9 From Char Lake, a dedicated 6-inch line is</p> <p>10 utilized to connect to the Signal Hill water treatment</p> <p>11 plant. It's proposed that that's where the flow meter</p> <p>12 be installed. This will -- there will be no other flow</p> <p>13 measured on this line, only the withdrawal water that</p> <p>14 is from Char Lake. And EXP has prepared the</p> <p>15 specifications and are currently working to have it</p> <p>16 installed as soon as possible.</p> <p>17 Next slide, please.</p> <p>18 So the plans for the Char Lake pump house: There</p> <p>19 are both environmental management plans and</p> <p>20 decommissioning and remediation plans that have been</p> <p>21 submitted. The environmental management plan assists</p> <p>22 with implementing the measures to protect the</p> <p>23 environment and minimize environmental impacts during</p> <p>24 the construction of both the new lake -- Char Lake pump</p> <p>25 house and the Signal Hill sites.</p> <p>26 The environmental management plan outlines</p>
<p style="text-align: right;">47</p> <p>1 requirements and procedures to minimize the surface</p> <p>2 water and fish habitat impacts by controlling erosion</p> <p>3 and drainage and settlement and, in turn, turbidity in</p> <p>4 the water.</p> <p>5 Pollution control and procedures are also</p> <p>6 implemented to reduce dust and particulate matter in</p> <p>7 the construction area. It also deals to -- determines</p> <p>8 the procedures for management of hazardous materials</p> <p>9 during the decommissioning should they become obvious.</p> <p>10 A spill response procedure are also outlined for</p> <p>11 spills on land, snow, and in water. And, finally, the</p> <p>12 environmental management plan describes in detail the</p> <p>13 reporting requirements that any spill may occur.</p> <p>14 Next slide.</p> <p>15 Additional details are provided in the</p> <p>16 decommissioning and remediation plan, as well as the</p> <p>17 spill contingency plan. The decommissioning plan</p> <p>18 assists with implementing the specific work and</p> <p>19 procedures in order to protect human health and</p> <p>20 minimize the environmental impacts during the</p> <p>21 decommissioning of the old Char Lake pump house. Due</p> <p>22 to the proximity of the pump house to Char Lake,</p> <p>23 control measures must be implemented to prevent</p> <p>24 movement of contaminants into the water that -- that</p> <p>25 are -- could be potentially caused by disturbing the</p> <p>26 soils and structure as it is being dismantled.</p>	<p style="text-align: right;">48</p> <p>1 The above-ground fuel tank must be safely removed,</p> <p>2 cleaned, and washed using a vacuum truck, and the metal</p> <p>3 will be disposed of in the community metal land</p> <p>4 field -- land disposal.</p> <p>5 Hazardous materials, such as lead-based paints,</p> <p>6 mercury-containing fluorescent light tubes, and PCBs in</p> <p>7 the light fixture ballasts are going to be securely</p> <p>8 removed and disposed of to recycling facilities.</p> <p>9 The scope of the new pump house and the</p> <p>10 remediation of the site and the new facility involve</p> <p>11 some of the following activities: The site work</p> <p>12 including access by truck and personnel, as well as a</p> <p>13 new power line; a provision of a new building,</p> <p>14 including electrical and mechanical systems; a</p> <p>15 provision of a new intake into Char Lake with a new</p> <p>16 transmission water main interconnecting the pump house</p> <p>17 at Char Lake to the Signal Hill water treatment plant;</p> <p>18 and the remediation of the petroleum contamination of</p> <p>19 the existing site and management of the contaminated</p> <p>20 soil.</p> <p>21 As previously mentioned, the design flow from the</p> <p>22 water source at the new pump house is going to be</p> <p>23 720 litres a minute. And the site that has been</p> <p>24 selected is 60 metres to the east of the existing</p> <p>25 facility, and that meets the required criteria for</p> <p>26 water intake.</p>

<p style="text-align: right;">49</p> <p>1 Next slide, please.</p> <p>2 The Char Lake pump house design and construction:</p> <p>3 A significant amount of work has already been done</p> <p>4 during the 2020 construction season, and the Char Lake</p> <p>5 site that includes the installation of silt fencing</p> <p>6 around the work site --</p> <p>7 THE CHAIR: Excuse me?</p> <p>8 MR. BELL: Yes.</p> <p>9 THE CHAIR: You need to slow down a bit.</p> <p>10 The court reporter cannot keep up with you.</p> <p>11 MR. BELL: Sorry. Again, I'm awfully</p> <p>12 excited.</p> <p>13 The work that has been done at Char Lake in 2020</p> <p>14 includes the installation of silt fencing around the</p> <p>15 worksite; excavation of the new pump house and concrete</p> <p>16 pours for foundations; and the new pump house building</p> <p>17 that has been already constructed; boilers and glycol</p> <p>18 pipes and pumps have also been installed; and bedding</p> <p>19 material has been imported; the -- Char Lake, with the</p> <p>20 turbidity curtain in place to prevent particulate</p> <p>21 matter from entering the raw water supply; and new</p> <p>22 intakes are being placed during the 2021 construction</p> <p>23 season. So there has been significant work done this</p> <p>24 year.</p> <p>25 Next, please.</p> <p>26 The recommended water treatment process that is</p>	<p style="text-align: right;">50</p> <p>1 going to be implemented at Signal Hill includes</p> <p>2 multiple filtration steps and disinfection using</p> <p>3 chlorine in the form of calcium hypochlorite.</p> <p>4 The filtration will provide the suitable</p> <p>5 protection for microorganisms removal and any small</p> <p>6 amounts of TSS and turbidity to get picked up by the</p> <p>7 Char Lake pumps.</p> <p>8 The chlorine addition protects against viruses and</p> <p>9 other microorganisms from the water source and provide</p> <p>10 protection from any cross-contamination that may occur</p> <p>11 in the utilidor distribution system.</p> <p>12 The first stage of the filters are backwashable</p> <p>13 media filters. A media filter is -- typically removes</p> <p>14 particles down to 7 to 10 microns in size, and that's</p> <p>15 suitable for the large turbidity particles as well as</p> <p>16 the giardia.</p> <p>17 The secondary proposed filters are disposable</p> <p>18 cartridge filters or polymer-based filters that filter</p> <p>19 down to 1 micron of size, which is suitable for further</p> <p>20 removal of small particles and include cryptosporidium.</p> <p>21 The disinfection method to be employed will be the</p> <p>22 use of chlorine in the form of calcium hypochlorite,</p> <p>23 and this will be delivered to site in dry format and</p> <p>24 prepared for a 24-hour period in a mixing or hydration</p> <p>25 tank.</p> <p>26 As can be seen in this drawing, the water will</p>
<p style="text-align: right;">51</p> <p>1 flow in from Char Lake on the left-hand side and will</p> <p>2 move towards the right; the first stage being</p> <p>3 multimedia filters, the second stage being the</p> <p>4 cartridge filters. All water will be treated and</p> <p>5 disinfected before entering into the reservoir, and</p> <p>6 then from the reservoir, two locations it can go to,</p> <p>7 being the hamlet utilidor system, where there is a</p> <p>8 constant recirculation, and to the truck fill to</p> <p>9 support the airport and any users that are on the</p> <p>10 truck-fill system.</p> <p>11 Next slide.</p> <p>12 The upgrade to the water treatment plant on</p> <p>13 Signal Hill examines the requirements for the water</p> <p>14 treatment as outlined by the Canadian Drinking Water</p> <p>15 Guidelines. This includes the upgrade of disinfection</p> <p>16 equipment and the inclusion of filtration equipment.</p> <p>17 Capital costs, as well as operational costs for</p> <p>18 the needs for the 30-year operation life, were</p> <p>19 considered when selecting the technology.</p> <p>20 The upgraded water treatment plant will be in the</p> <p>21 same building but will incorporate additional</p> <p>22 filtration equipment, new disinfection equipment, new</p> <p>23 circulation pumps, a washroom facility, additional</p> <p>24 equipment storage, and a laboratory area for -- as well</p> <p>25 as a maintenance area.</p> <p>26 Next side, please.</p>	<p style="text-align: right;">52</p> <p>1 The unused reservoir tank has been removed</p> <p>2 already, and the building has been expanded in an</p> <p>3 easterly direction. A significant amount of this work</p> <p>4 has been completed during this construction year, and</p> <p>5 that includes the site grading; some concrete</p> <p>6 demolition work; building-addition work, including some</p> <p>7 concrete walls room; roof and cladding; and any</p> <p>8 obsolete equipment that was in the building and has</p> <p>9 been removed, as well as other materials.</p> <p>10 Next.</p> <p>11 So for quality assurance and quality control, a</p> <p>12 program has been developed and is used to maintain the</p> <p>13 standards of monitoring programs for both the</p> <p>14 wastewater treatment and disposal and the water supply</p> <p>15 and treatment, as well as solid waste disposal, as</p> <p>16 described in each one of the O&M manuals.</p> <p>17 The program describes quality assurance and</p> <p>18 quality control processes and procedures as applied</p> <p>19 during field activities to accurately reflect the</p> <p>20 attributes of either the water, the wastewater, or the</p> <p>21 leachate being tested.</p> <p>22 Field quality control addresses</p> <p>23 cross-contamination as a common source of -- and an</p> <p>24 error in sampling procedures and sample handling and</p> <p>25 storage of equipment; i.e., this is errors during our</p> <p>26 sampling.</p>

<p style="text-align: right;">53</p> <p>1 So field QC samples must include field blanks, as 2 labelled as such, to trace sources of artificially 3 induced contamination. Or blind duplicates can be 4 used, not labelled as such, to ensure the analytical 5 precision. 6 Laboratory quality control is applied by 7 laboratories after the samples have been received from 8 the field and to enable the laboratory to produce 9 accurate and reproducible results on an ongoing basis. 10 The samples are collected in laboratory supplied 11 bottles and jars and are analyzed at laboratories 12 certified by the Canadian Association of Lab 13 Accreditation. All analytical reports are to include 14 QA/QC reports, and this hamlet has been using the 15 services at accredited labs in Ottawa named "Caduceon 16 Environmental Labs". 17 Next. 18 So for the spill containment -- or contingency 19 plan: The spill contingency plan is used to address 20 the proper responses to the anticipated types of spills 21 that may be -- occur during the routine operation and 22 maintenance activities at the hamlet's facilities 23 associated with wastewater disposal, water supply, as 24 well as the solid waste disposal. 25 This contingency plan presents potential 26 contaminants, spill scenarios, and existing preventive</p>	<p style="text-align: right;">54</p> <p>1 measures and response organizations that are to be 2 used. 3 The spill contingency plan has action to include 4 potential impact from -- and procedures for containing 5 the chemical spills, such as sodium hypochlorite, being 6 the chlorine, and any petroleum spills, such as diesel 7 fuel, used for the powering of equipment. 8 The spill contingency plan provides information in 9 case of the spill and spill kit locations, as well as 10 spill reporting procedures. 11 It also includes the standard spill kit 12 requirements, as well as forms for filling them out and 13 reporting. 14 And I think that's the last slide there, Sergey. 15 Oh, sorry. My bad. 16 At the wastewater treatment plant a number of 17 technical issues and concerns regarding the current and 18 future wastewater treatment have been raised by the 19 stakeholders. As such, EXP, my company, has prepared 20 and submitted a technical memo addressing the fecal 21 coliform limits for the O&M plan for the existing 22 macerator and a technical memo addressing the ammonia 23 for the new wastewater treatment plant and technical 24 memo that reviews the 2012 and the 2020 wastewater 25 treatment plant designs. 26 The calculated fecal coliform values, which were</p>
<p style="text-align: right;">55</p> <p>1 determined based on linear regression of data reflected 2 from 2016 to 2020, and includes 18 results as a data 3 set. 4 For a flow greater than 600 litres per person per 5 day and a TSS -- so a total suspended solids -- of 6 80 milligrams per day, the calculated fecal coliform 7 was calculated to be 157,000 units per hundred 8 millilitres. For flows between 150 litres per person 9 per day and 600 and a TSS of 80, the calculated number 10 was increased to 183,000 coliform units per 11 100 millimetres. 12 And that was the last slide, I believe. No? I 13 got ten more? What? Sergey, are you adding slides to 14 this? 15 MR. ROY: No, no. Continue. "EXP has 16 previously noted" ... 17 MR. BELL: EXP has previously noted that 18 the building macerator unit is an open flow and that 19 the heater has been -- exposed in a heating element, 20 including thermostat, and the fan is completely blocked 21 off with insulation. 22 Okay. I was down at the building yesterday, so 23 yes. 24 There's not so much smell in the -- in the 25 building because the flow is so dilute, but it was 26 noted to the GN that this is a hazard as -- an</p>	<p style="text-align: right;">56</p> <p>1 explosion potential for operators, and there is 2 ventilating issues. This is the way it is in all 3 macerator and head works buildings. 4 As such, health and safety risks from these 5 hazards need to be mitigated. 6 The identified issues associated with the building 7 are that it's not ventilated, has only a single-man 8 door entry, and it's flushed to the exterior grade, a 9 vent is not operating, electrical equipment is not 10 explosion-proof in design and does not have any 11 hazardous gas sensors. 12 We've recommended a number of procedures that 13 should be followed when entering the macerator 14 building. This is useful to investigate short-term 15 options until a new water treatment plant -- wastewater 16 treatment plant is constructed and commissioned. These 17 may include things such as acquisition of gas detector 18 and replacement of the heating, lighting, fans, plugs, 19 and disconnects for the explosion-proof units. 20 Further on this, the current trends in the 21 wastewater regulations indicate that effluent ammonia 22 is likely to become a parameter of concern throughout 23 Nunavut, and specifically the hamlet the Resolute Bay 24 in the future. 25 There are currently no regulations in place in 26 Nunavut or the hamlet that require biological</p>

<p style="text-align: right;">57</p> <p>1 electrification to meet the effluent ammonia discharge 2 objectives; however, it's anticipated that there will 3 be future regulatory changes for that far north -- that 4 include the far north that could include new guidelines 5 for the ammonia. 6 With the uncertainty of future regulatory changes, 7 the hamlet of Resolute Bay has -- will be well-served 8 by installing a biological mechanical treatment system 9 according to a predesign report that my company has 10 done. 11 The proposed process water technology could be 12 designed for ammonia removal to meet the current WSER 13 performance standards in effect throughout Canada. 14 There are a number of key design factors that 15 remain very similar or unchanged between the original 16 2012 design and the 2020 design as completed by my 17 company. The most significant difference was the 18 process technology with the intent to better balance 19 the treatment performance with some of the economic and 20 operational challenges. This will result in a more 21 cost-competitive system that is still capable of 22 providing a high-quality effluent for exit to the 23 ocean. 24 MR. ROY: Okay. Thank you, Eric. Let 25 me finish the last slide myself. Thank you. 26 MR. BELL: Happily.</p>	<p style="text-align: right;">58</p> <p>1 MR. ROY: So I'm taking -- yeah. 2 Thank you. Thank you, Eric. 3 So the last slide is the -- how we see the future 4 wastewater treatment plant. So what is the 5 recommendation in the technical meeting by ECCC -- they 6 are saying -- they're suggesting -- and we were also 7 designing the plant following the solution that CBOD 8 should not be more than 25 milligram per litre. It 9 means we have to keep the CBOD below at the approved 10 level, and the compliance point next to the water plant 11 should be less than or equal to 25 milligram per litre. 12 The same way, the total suspended solids should be less 13 than or equal to 25 milligram per litre. 14 The average concentration of total residual 15 chlorine should be less than or equal to 0.02 milligram 16 per litres. 17 The maximum concentration of unionized ammonia 18 should be less than 1.25 milligram per litre expressed 19 as nitrogen at 15 degree, plus/minus 1 degree 20 centigrade. Be non-accurately lethal effluent. 21 So these are going to be a compliance point of the 22 new treatment plant. And the effluent coming from the 23 treatment plant, that water quality has to satisfy this 24 criteria. So this is my last slide of the 25 presentation. 26 Before I will go for question, I have one question</p>
<p style="text-align: right;">59</p> <p>1 to the audience: Is the CAO of the Municipality of 2 Resolute, Steve Piercey -- I'm not hearing his sound. 3 He's in the meeting? Hello? Hello? 4 MR. PIERCEY: Yeah. Go ahead, Bhabesh. 5 MR. ROY: Oh, I'm just asking -- oh, you 6 are -- you are there. You are -- because you are 7 not -- not counting your name. So, anyway, I'm glad 8 that you are there. Thank you. Thank you, Steve. 9 Thank you, Mr. Chair. This is end of my 10 presentation. 11 THE CHAIR: Teresa, do you want to speak 12 to that? Okay. Okay. 13 MR. ROY: Mr. Chair, I just want to 14 mention that the -- all the questions will be directed 15 by the name of GN to me, and I will share whoever will 16 respond to the question from my team. 17 Thank you, Mr. Chair. 18 THE CHAIR: Okay. I think we can -- we 19 can have a break for now. Break -- lunch for break, 20 and then we can come back at 2 -- 1:15. And we have 21 one interpreter as well, so need the break as well. 22 Okay. We can come back -- come back at -- you can 23 continue with your presentation -- oh, all done? Okay. 24 Yeah. We -- we can start again at 1:15 this afternoon. 25 MR. ROY: Okay. Thank you. 26 THE CHAIR: Thank you.</p>	<p style="text-align: right;">60</p> <p>1 _____ 2 PROCEEDINGS ADJOURNED UNTIL 1:15 PM 3 _____ 4 (PROCEEDINGS RECOMMENCED AT 1:31 PM) 5 THE CHAIR: Welcome back to -- for this 6 afternoon's session. 7 So questioning we were about to start by the time 8 we left the -- the room for lunch, so I'd like to ask 9 the Crown-Indigenous and Relation -- Crown-Indigenous 10 Relations and Northern Affairs -- Sarah and Godwin, you 11 may want to come over to the intervention table. 12 THE CHAIR: Go ahead. 13 Crown-Indigenous Relations and Northern Affairs 14 Questions Government of Nunavut, Community Government 15 Services 16 MS. FORTE: Thank you. So it's Sarah 17 Forte speaking. I have just two questions, which is 18 more clarifications I'm requesting. 19 The first one is in regards to the water volume 20 being requested. There was quite clear communication, 21 but then just recently there was a submission with 22 projected water-use volumes up to 2047, and these 23 numbers are also on page 14 of the presentation. And 24 so I'd just like to confirm whether the quantity of 25 water being requested for this water licence is the 26 value projected for the 2040, which is 2016 --</p>

<p style="text-align: right;">61</p> <p>1 216,528 cubic metres.</p> <p>2 THE CHAIR: Thank you.</p> <p>3 Applicant, go ahead.</p> <p>4 MR. ROY: Thank you. Thank you,</p> <p>5 Mr. Chairman. Thank you, Sarah. This is a question</p> <p>6 you asked in the technical meeting as well as here.</p> <p>7 This question I'll be sharing with Tony, who is our --</p> <p>8 who is our -- you know, the senior technical advisor to</p> <p>9 me. I just go in part, and then he'll be giving a</p> <p>10 detailed explanation.</p> <p>11 This -- as you see, there are different items:</p> <p>12 per capita, litre per capita per day, and also there is</p> <p>13 the bleed quantity. So this is a consumption plus</p> <p>14 bleed water. If we can combine together, that is the</p> <p>15 total volume we need to extract from the Char Lake, and</p> <p>16 that is the total volume we are anticipating with our</p> <p>17 2024 water licence.</p> <p>18 So having said so, this is -- Tony will be -- to</p> <p>19 explain this, and I was requesting Tony Whalen to go in</p> <p>20 details on this expectancy.</p> <p>21 Tony.</p> <p>22 MR. WHALEN: Sure. Thank you, Bhabesh.</p> <p>23 Can everybody hear me okay?</p> <p>24 MR. ROY: Yeah, I'm hearing okay.</p> <p>25 MR. WHALEN: Okay.</p> <p>26 Yeah. So I believe the question is, you know --</p>	<p style="text-align: right;">62</p> <p>1 the volume that we're requesting up to 2040, it is</p> <p>2 indeed the 216,528 cubic metres, which has been</p> <p>3 calculated, as Bhabesh indicated, on a number of -- a</p> <p>4 number of pieces of information, you know, one being</p> <p>5 the population, and there's a projected population</p> <p>6 growth over the -- over the 20 years, so that's</p> <p>7 included in the calculation. And then the per capita</p> <p>8 consumption, it's also shown increasing over the course</p> <p>9 of the -- the 20 years, as well; as well, the community</p> <p>10 consumption based on that per capita and the</p> <p>11 population.</p> <p>12 So the other part -- essentially, everything in</p> <p>13 here increases over time, and that's kind of a</p> <p>14 worst-case scenario, just so -- we want to make sure</p> <p>15 that, you know, the request is sufficient to handle</p> <p>16 any -- any demand. So this is all speculation in terms</p> <p>17 of the population increase, per capita consumption</p> <p>18 increases, you know, increases in water at the airport,</p> <p>19 and also an increase in bleed water. So -- so it all</p> <p>20 leads to an increase in the water use. So this 216,528</p> <p>21 is, in fact, based on all of these projections as a</p> <p>22 worst-case scenario for the amount of water that will</p> <p>23 be consumed and used up to 2040.</p> <p>24 So does that -- does that answer the question at</p> <p>25 hand?</p> <p>26 And thank you, Mr. Chair.</p>
<p style="text-align: right;">63</p> <p>1 MS. FORTE: Yes, that answers my question.</p> <p>2 Thank you.</p> <p>3 My next question has to do with some information</p> <p>4 found on page -- or Slide 16 regarding the installation</p> <p>5 of the flow meter -- or a flow meter at the -- either</p> <p>6 the pump station or the water treatment plant. The --</p> <p>7 on the slide, it says that this -- it was to be</p> <p>8 arranged -- the delivery to be arranged for</p> <p>9 October 2020 with a goal to collect at least one week</p> <p>10 of flow data prior to the hearing.</p> <p>11 From your comments, Eric, I understand that</p> <p>12 perhaps this didn't occur, and so I would be looking</p> <p>13 for confirmation of that. And, also -- and if it</p> <p>14 hasn't occurred, an estimated time schedule at which it</p> <p>15 might occur.</p> <p>16 MR. BELL: Thank you for the question.</p> <p>17 Eric Bell here.</p> <p>18 I can confirm that it has not yet been installed.</p> <p>19 We are in the works of getting a contractor to install</p> <p>20 it. As far as the timeline, I know that it's going to</p> <p>21 be within the next three or four weeks.</p> <p>22 Tony Whalen, I'll let you speak up if you think</p> <p>23 that that is an incorrect statement.</p> <p>24 And as for the duration and the commitment of the</p> <p>25 flow measurement data, Bhabesh, perhaps you could speak</p> <p>26 to what the commitment is that we -- we have on that.</p>	<p style="text-align: right;">64</p> <p>1 MR. ROY: Yeah. Thank you.</p> <p>2 THE CHAIR: Can you state your name --</p> <p>3 state your name for the record.</p> <p>4 MR. ROY: Yeah. Bhabesh Roy. Thank</p> <p>5 you, Chair.</p> <p>6 Flow meter, actually, we are talking about for a</p> <p>7 long -- since last technical meeting. Here is the</p> <p>8 source to the -- of this flow meter. Flow meter should</p> <p>9 be in the existing pump station. So while we are doing</p> <p>10 the design, we found that this pump station built so</p> <p>11 long ago, there is no meter today on the market</p> <p>12 available to fit into the existing pump station.</p> <p>13 So Eric Bell did the design, and he came up with</p> <p>14 the conclusion that we can remove the location at --</p> <p>15 not in the pump station but in the water</p> <p>16 treatment plant prior to water coming inside the water</p> <p>17 plant, so that way -- it's the same building, same</p> <p>18 quantity, no division -- we can get a device. The</p> <p>19 device will be lined. Contract call given to someone</p> <p>20 to install it. As you know, the COVID-19 situation</p> <p>21 there is too many constraints.</p> <p>22 I am asking Tony -- Tony is supervising the</p> <p>23 construction work. He is the manager. He will give</p> <p>24 you more update, more clearer information, when exactly</p> <p>25 the flow meter will start working.</p> <p>26 Tony.</p>

<p style="text-align: right;">65</p> <p>1 MR. WHALEN: Sure. Thank you. 2 Thank you, Bhabesh. Again, it's Tony Whalen here. 3 Yeah. Currently we have acquired the meter 4 itself, and I believe it is in Edmonton at the moment. 5 And as Bhabesh did mention, there are some delays, 6 because of COVID, in getting things shipped. I mean, 7 even at the best of times, it's -- it's challenging to 8 get things shipped to Resolute, and the COVID pandemic 9 has made that even more difficult. So we're -- we're 10 getting it closer to Resolute. Hoping we will have it 11 in Resolute in the next week to two weeks, and then we 12 will be coordinating the installation. 13 Currently, the contractor is working in the 14 Char Lake pump house. The -- the electrical and 15 mechanical components are -- are being installed there, 16 and those are the people that are actually going to do 17 the installation of the flow meter. So Eric suggested, 18 you know, we're three to four weeks out; that is 19 probably realistic. I'm hoping we can do better than 20 that, but that's -- that's what we should kind of plan 21 for. 22 The installation itself is relatively quick. It 23 should be done in less than, you know, a half a day. 24 This is just a matter of drawing water off of the tank 25 there while the -- you know, the pipe is cut and the -- 26 the flow meter is installed in there. And Eric was</p>	<p style="text-align: right;">66</p> <p>1 correct; it will be installed at the Signal Hill water 2 treatment plant because there just is not sufficient 3 space at the old Char Lake pump house to install that 4 meter there. Hopefully that answers the question. 5 Thank you, Mr. Chairman. 6 THE CHAIR: Thank you. 7 Any more questions? Okay. Thank you. 8 Oh, okay. Godwin. 9 MR. OKONKWO: Thank you, Mr. Chair. My name 10 is Godwin, manager of water resources, Crown-Indigenous 11 Relations and Northern Affairs Canada. 12 I have one question, and this is back to the first 13 question Sarah was asking about quantity of water 14 asked. But my question is -- I did hear that the 15 estimation or projection accounts for time when 16 everybody wants to use water, so I'm looking at it, and 17 I'm looking at the population of Resolute, of the town, 18 the community. But then one of the slides where you 19 presented the town population at 290, you indicated 20 that during the summer, due to military presence for 21 training, the population of the town increases to 800. 22 So I was wondering -- so that's probably not seen 23 as the real population, that increase. But if it 24 happens every summer, I'm just wondering if the 25 projections for the water required, if -- when you say 26 that it accounts for everybody's need, if it includes</p>
<p style="text-align: right;">67</p> <p>1 the need of the -- I don't know if you call it -- 2 temporary increase in population? 3 MR. BELL: Eric Bell here with EXP. 4 I'm going to attempt a bit of an answer at this, 5 and then, Tony Whalen, if you could chime in afterwards 6 to let me know your -- your thought on this to support 7 my information. The -- 8 THE CHAIR: Just hold on. 9 Staff. Stephanie. 10 MS. AUTUT: Thank you, Mr. Chair. 11 Stephanie Autut, Nunavut Water Board. 12 I'm going to weigh in. For the third time, we're 13 going to have to ask you to slow down so the 14 interpreters and the stenographer can stay on track. 15 Thank you. 16 MR. BELL: Thank you very much. I will 17 do my best. 18 When there is the influx of population, that is 19 primarily out at the airport sites, and the airport 20 sites are all on the truck-fill situation. The 21 truck-fill situation definitely increases the overall 22 amount of water that's used there, but when we talk 23 about some of the peak water consumption numbers, that 24 is the peak outflow from the Signal Hill water 25 treatment plant. That's not really accounted for with 26 regards to the instantaneous peak that we need when</p>	<p style="text-align: right;">68</p> <p>1 we're sizing pumps and looking at contact time and 2 things like that. That the overall consumption of 3 water -- you're right -- is increased, but that is from 4 the -- the truck-fill perspective. 5 And I'm also under the impression -- and this is 6 where I want to draw from Tony's expertise on this -- 7 is that there is sort of a reduced number for the 8 military when it comes to the average consumption days, 9 and on a truck-filled system, there is a lower daily 10 average of customer -- customer usage. 11 Tony, I'll let you speak to that. 12 MR. WHALEN: Sure. Thank you, Eric. Tony 13 Whalen here again. 14 So, I mean, I think the question comes down to 15 have we accounted for military personnel and their use 16 of water in our calculations for consumption. The 17 answer to that is yes. However, because it is based on 18 truck fills, that number has been, sort of, equalized 19 over time. But you'll see in the -- the calculation of 20 annual water extraction from Char Lake that there is an 21 airport consumption number which is fairly significant. 22 In fact, you can see it's, you know, more than half of 23 the community consumption as well. So that is 24 accounted for overall in the -- in the calculation of 25 consumption. So, yeah, I think -- hopefully that -- 26 that answers your question.</p>

<p style="text-align: right;">69</p> <p>1 Thank you, Mr Chair.</p> <p>2 THE CHAIR: Thank you.</p> <p>3 MR. ROY: Mr. Chair, I just want to</p> <p>4 disclose something. The -- any -- any agency asks a</p> <p>5 question to the Applicant, that is me, and don't talk</p> <p>6 to any individual. So questions asked to me, and we'll</p> <p>7 make the answer from -- for the question using any of</p> <p>8 our technical advisors or the embassy or -- so, again,</p> <p>9 I repeat, Applicant -- and no one should directly ask</p> <p>10 question to non-applicant. It should be to Applicant</p> <p>11 and Applicant to -- to the Water Board.</p> <p>12 Hello? Hello?</p> <p>13 THE CHAIR: Yeah, I can hear you. So,</p> <p>14 yeah, just -- I'm just given some direction here. So</p> <p>15 okay. We'll take your -- take your word.</p> <p>16 MR. ROY: Thank you.</p> <p>17 THE CHAIR: Okay. Next intervener I'd</p> <p>18 like to call upon is Environment and Climate Change</p> <p>19 Canada.</p> <p>20 Anna, are you -- can you hear? Have you -- go</p> <p>21 ahead.</p> <p>22 MS. GRAHAM: Yes. This is Anna Graham,</p> <p>23 Environment and Climate Change. I believe our water</p> <p>24 quality expert, Meagan Tobin, would like to ask a</p> <p>25 question.</p> <p>26 Environment and Climate Change Canada Questions</p>	<p style="text-align: right;">70</p> <p>1 Government of Nunavut, Community Government Services</p> <p>2 MS. TOBIN: Hi. Yes. Thank you,</p> <p>3 Mr. Chair. This is Meagan Tobin with Environment and</p> <p>4 Climate Change Canada. I just have one question.</p> <p>5 So in the presentation, as well as in the</p> <p>6 environmental management plan, it was described the</p> <p>7 settlement and erosion-control practices that will be</p> <p>8 implemented to prevent increases in turbidity in</p> <p>9 Char Lake that is associated with the construction and</p> <p>10 the decommissioning of the pump houses. However, there</p> <p>11 was no description of any turbidity monitoring to be</p> <p>12 undertaken in Char Lake in order to ensure that these</p> <p>13 mitigations are working as intended and that there</p> <p>14 aren't unexpected impacts to water quality.</p> <p>15 So my question is, will the environmental</p> <p>16 management plan be updated to include turbidity</p> <p>17 monitoring to monitor for increases in turbidity that</p> <p>18 may occur during construction in the water body?</p> <p>19 Thank you, Mr. Chair.</p> <p>20 THE CHAIR: Thank you.</p> <p>21 Applicant, do you -- respond to the question.</p> <p>22 MR. ROY: There is a little error of the</p> <p>23 presentation we should mention about the turbidity</p> <p>24 monitoring. This question I'll be sharing with Tony.</p> <p>25 Tony will give the explanation how to install in the</p> <p>26 Char Lake, how we can protect. But the turbidity</p>
<p style="text-align: right;">71</p> <p>1 monitoring, yes, we did. As I mentioned before, that</p> <p>2 we have the ATCO onboard who is operating the system,</p> <p>3 and our asset management division is the --</p> <p>4 administering the contract.</p> <p>5 So turbidity has been tested on regular basis</p> <p>6 during the construction and with the close contact with</p> <p>7 the Department of Health. So we don't see any kind of</p> <p>8 adverse turbidity developing during construction.</p> <p>9 Because if we did that first, then public health will</p> <p>10 declare the water turbidity, and it will not happen</p> <p>11 because turbidity under control.</p> <p>12 Tony, you want to explain a little bit.</p> <p>13 MR. WHALEN: Sure. Thank you, Bhabesh.</p> <p>14 Yes. So, I mean, part of the environmental</p> <p>15 management plan included silt fencing adjacent to</p> <p>16 Char Lake in the area that we're doing any work on</p> <p>17 land. In addition to that, we did also install</p> <p>18 turbidity curtains around any area that we were working</p> <p>19 in, you know, directly in Char Lake with regard to</p> <p>20 placing gravel so that we can install the intake lines</p> <p>21 next year.</p> <p>22 So the turbidity curtains were actually installed,</p> <p>23 and we did measure -- we had the turbidity measured by</p> <p>24 ATCO during that time, and in comparison to previous</p> <p>25 turbidity numbers, there was -- there was no increase</p> <p>26 evident with the work that was done.</p>	<p style="text-align: right;">72</p> <p>1 Also, the plan was submitted to the Department of</p> <p>2 Health to review and provide comments prior to doing</p> <p>3 the -- the work in Char Lake. So I think, overall,</p> <p>4 we -- like I mentioned, we did not see an increase in</p> <p>5 turbidity in the raw water in Char Lake during the</p> <p>6 construction activities. And we will continue those</p> <p>7 mitigation programs in 2021 when we recommence work in</p> <p>8 Char Lake, so the turbidity curtains will be</p> <p>9 reinstalled, and then the silt fencing is still there</p> <p>10 and will remain there until the end of next year's</p> <p>11 construction season. So both of those measures will</p> <p>12 ensure that we reduce any kind of impact of turbidity</p> <p>13 formation in the raw water for Char Lake.</p> <p>14 Thank you, Mr. Chair.</p> <p>15 THE CHAIR: Thank you.</p> <p>16 Any more question from ECCC?</p> <p>17 MS. TOBIN: I think --</p> <p>18 MS. GRAHAM: We have no --</p> <p>19 MS. TOBIN: Oh, sorry. Thank you,</p> <p>20 Mr. Chair. It's Meagan Tobin with Environment and</p> <p>21 Climate Change Canada. I just have one follow-up.</p> <p>22 So I -- I do understand the mitigations that are</p> <p>23 being applied. I just wanted to ensure that the</p> <p>24 continuous testing of water quality and the turbidity,</p> <p>25 you know, outside of those mitigations is being applied</p> <p>26 to ensure that the mitigations are working as intended.</p>

<p style="text-align: right;">73</p> <p>1 And, I guess, just my other question is whether 2 it's intended that the environmental management plan is 3 going to be updated to -- to outline the turbidity 4 monitoring that is being undertaken. 5 Thank you, Mr. Chair. 6 THE CHAIR: Thank you. 7 Applicant. Applicant, do you have any response to 8 question? 9 MR. ROY: Can you hear me? You hearing 10 me now? 11 THE CHAIR: Stephanie, go ahead. 12 Okay. Go ahead. 13 MR. ROY: Yeah. 14 THE CHAIR: Go ahead. 15 MR. ROY: Okay. Mr. Chair, I think that 16 we already explained the process in place to monitor 17 the turbidity this year, and most of the system is 18 already onboard to continue monitoring in 2021. 19 So you are asking to update the environmental 20 management plan? Yes. Once we complete the exercise, 21 we will update the environmental management plan to 22 resubmit. 23 Thank you, Mr. Chair. 24 THE CHAIR: Thank you. 25 Any more questions from ECCC? 26 MS. TOBIN: Thank you, Mr. Chair. Meagan</p>	<p style="text-align: right;">74</p> <p>1 Tobin with Environment and Climate Change Canada. I 2 have no further questions. 3 THE CHAIR: Thank you. 4 Now I'd like to ask the -- the -- the Board -- 5 Nunavut Water Board staff. Do you have any questions 6 to the applicant? 7 MS. AUTUT: Thank you, Mr. Chair. 8 Stephanie Autut, Nunavut Water Board. 9 Mr. Chair, we do have a few questions for the 10 Applicant, so I'm going to ask that the technical staff 11 address those questions at this time. Thank you. 12 THE CHAIR: Thank you. 13 Go ahead, Nunavut Staff. 14 Nunavut Water Board Staff Questions Environment and 15 Climate Change Canada 16 MR. KUFLEVSKIY: Thank you, Mr. Chair. This is 17 Sergey Kuflevskiy, the technical advisor of the Water 18 Board. I have a few questions for the Applicant. 19 On Slide 14, where you showed the volumes of water 20 projected, the volumes of water keep growing, but, from 21 our understanding, the bleeding water that is currently 22 used to dilute the sewage was supposed to drop once the 23 water treatment -- wastewater treatment plant is 24 constructed. So if everybody goes back to Slide 14, 25 you see that the percentages, the contributions from 26 the bleed water, keep going up even past the</p>
<p style="text-align: right;">75</p> <p>1 construction of the wastewater treatment plant. 2 Could you please clarify why this is happening. 3 Because, from our understanding, this was the main -- 4 the main reason why you wanted to -- one of the reasons 5 why you wanted to build the wastewater treatment plant, 6 to have the decrease in water intake to basically 7 prevent this water from being wasted on bleed in the 8 sewage. 9 Thank you, Mr. Chair. 10 THE CHAIR: Thank you. 11 Applicant. 12 MR. ROY: Thank you, Mr. Chair. 13 I think the water treatment -- wastewater 14 treatment plant is to -- proposed to bleed -- do you 15 see -- the -- the wastewater coming from the community. 16 So it is -- the bleed water is also part of the mixing 17 of the sewage, and the mix is coming through the 18 wastewater treatment plant. So wastewater treatment 19 plant -- I don't think we use the quantity of bleed 20 water because that process is before the treatment 21 process. I leave it to our consultant to explain 22 better. 23 Daryl and Tony, can one of you go ahead to 24 explain, please. 25 THE CHAIR: Thank you. 26 MR. WHALEN: Okay. Yeah. Thank you,</p>	<p style="text-align: right;">76</p> <p>1 Bhabesh. 2 And, Daryl, you can correct me if I'm -- I'm 3 wrong. 4 But, yeah, I -- I'm not sure where it came out 5 that, you know, bleed water would be produced once the 6 wastewater treatment plant was constructed and 7 commissioned. In fact, yeah, that -- that's not the 8 impact that will happen by installing the wastewater 9 treatment plant. The -- the bleed water is used to 10 keep -- to keep things from freezing within the pipes, 11 so you need that water flowing constantly. And, yeah, 12 in this case, that -- that still has to happen even 13 after the wastewater treatment plant is installed. 14 So, yeah, I think that's -- that would be my 15 explanation for that. Hopefully that answers the 16 question. 17 Thank you, Mr. Chair. 18 MR. KUFLEVSKIY: Thank you. Thank you, 19 Mr. Chair. Thank you, Tony. 20 But if you look at this table, the increase is -- 21 that would be disproportional. Like, if you look at 22 the percentages, you go from 35 percent to 40 percent, 23 so it's not your regular, like, 3 percent increase in 24 consumption. So how can you explain that? 25 MR. ROY: So, Tony, I think we -- you 26 want to explain, or you want Daryl to do?</p>

<p style="text-align: right;">77</p> <p>1 THE CHAIR: State your name before you 2 speak for the record, please. 3 MR. ROY: Hi. Yes, Mr. Chair. This is 4 Bhabesh. 5 So I'm just requesting Tony or Daryl to go into 6 more details because the -- Sergey's question is water 7 treatment plant, but we are talking about bleeding 8 quantity. It's not increasing or decreasing, nothing 9 to do with the water treatment plant. So I think Tony 10 already explained, but the bleeding part is before the 11 treatment process. So you take these -- the water 12 treatment plant at -- or not the water treatment plant, 13 the bleeding quantity will increase according the 14 increasing of the population. 15 I don't think it adds any kind of the 16 relationship. In terms of volume, yes. But it -- 17 building a wastewater treatment plant, it's nowhere it 18 can reduce the volume of the bleeding quantity. That's 19 my understanding. Let me -- will explain much better. 20 Tony. 21 MR. KUFLEVSKIY: Thank you, Bhabesh. Before 22 Tony -- this is Sergey Kuflevskiy. Before Tony answers 23 the question, I just wanted to clarify what exactly I 24 was asking about. 25 If you look at that table, for the year 2020, 26 you -- you have a 35 percent contribution from a --</p>	<p style="text-align: right;">78</p> <p>1 contribution from -- for the bleed water. And if you 2 go to the year 2030, it increases by 3 percent to 3 38 percent. When you go to the next 10-year period, it 4 increases only by 1 percent. So why is such a 5 difference? Why does the water increase by 3 percent 6 in the first 10 years and only by 1 percent in the next 7 10 years? So is there something that we are missing 8 here, or this is going to be a part of the design? 9 Thank you. 10 THE CHAIR: Thank you. 11 Go ahead, Applicant. 12 MR. ROY: Okay. Thank you. Thank you, 13 Mr. Chair. 14 I think the explanation will come from the 15 consultant because the Char Lake -- I understand that 16 the part 20 to 30 is the 3 percent increase, and then 17 30 to 40 and 47, increase is not that significant; it's 18 going lower. So I think the -- Tony and Daryl could 19 explain it better. 20 So who will take over the call, Tony or Daryl? 21 MR. WHALEN: I can -- I can take that, 22 Bhabesh. 23 MR. ROY: Thank you. 24 MR. WHALEN: Tony Whalen speaking here. 25 Yeah. So, I -- I mean, I can look into this a 26 little further, but the -- the bleed water percentage</p>
<p style="text-align: right;">79</p> <p>1 is the total amount of bleed water as a percentage of 2 the total water extracted. There may just be a -- a 3 rounding error in the -- the percentage there. But 4 you can see that the bleed water from 2020 to 2030 5 increases by approximately, you know, 40,000 litres a 6 day, and then from 2030 to 2040, it's, again, another 7 40,000 litres per day. So the actual amount of bleed 8 water per day, that increase over those ten-year 9 periods, is essentially the same. 10 So then you would have to look to the total water 11 extracted, and that's where that percentage comes from, 12 and that's why you see a bit of a difference in the 13 percentages there over -- over time. 14 So my explanation would be that the actual bleed 15 water itself, the -- there's a proportional increase in 16 that over time, but the percentage, the numbers are 17 slightly different because there are a number of 18 variables that are used to calculate that -- that 19 percentage in that case because it's based on 20 consumption -- total consumption. Hopefully that 21 explains it. 22 Thank you, Mr. Chair. 23 THE CHAIR: Thank you. 24 Water Board Staff. 25 MR. KUFLEVSKIY: This is Sergey Kuflevskiy. 26 Thank you, Tony. It is -- it -- thank you for</p>	<p style="text-align: right;">80</p> <p>1 this explanation, but it is still quite confusing. 2 Like, you have the same pipe basically going in and out 3 of the town. The diameter -- like, dimensions of the 4 pipe did not change, so the volume of the water 5 contained in this pipe should theoretically stay the 6 same, but the volume of the water basically is 7 increasing. 8 So the bleed water -- like, how -- how does the -- 9 what does the bleed water have to do with the intake 10 from the source? The bleed water is basically used to 11 keep the pipes warm and, to a certain extent, to dilute 12 the sewage. So can you please comment on the reason 13 why the actual volumes of the bleed water are growing. 14 Thank you. 15 THE CHAIR: Thank you. 16 Applicant. 17 MR. ROY: Thank you, Mr. Chair. I think 18 I can go back to Tony again to explain it more better 19 in detail. 20 Thank you, Tony. 21 MR. WHALEN: Yes. Thank you, Bhabesh. 22 Yeah. I -- I need to kind of take a look at my -- 23 I'm just trying to call up my spreadsheet. So, 24 essentially, there was a design report prepared back in 25 2012, and it had some of these numbers in it, and then 26 I basically went in and updated it based on the fact</p>

<p style="text-align: right;">81</p> <p>1 that, you know, we are not installing anything in 2012; 2 in fact, we're doing it in 2020. 3 So if you would allow me to just take a look at 4 some of these numbers to get you some of the 5 information that you're requesting, I -- I could 6 provide that to you later on during the hearing, if 7 that would be acceptable. I'd just like to take a look 8 at the numbers rather than just speculating off -- off 9 the cuff here. Does that sound okay? 10 Thank you, Mr. Chair. 11 THE CHAIR: Thank you. 12 Staff. 13 MR. KUFLEVSKIY: Thank you, Tony. This is 14 Sergey. Absolutely. Like, the -- the question can be 15 deferred, and you can answer it later on. It is 16 just -- in the Water Board's opinion, it's a very 17 critical question. Because if you remember, back in 18 2012, the lines were not exactly perfect, so there was 19 a lot of seepage and a lot of water loss through the 20 lines. But then the lines were repaired. So was this 21 fact accounted in the new design, or you're still 22 accounting for the -- for the water to be lost? But 23 you can absolutely confirm this later on during the 24 hearing, and we can move to the next question. 25 So my -- again, this is Sergey Kuflevskiy. My 26 next question would be about the wastewater treatment</p>	<p style="text-align: right;">82</p> <p>1 plant itself. On your Slide 30, you're mentioning that 2 the biological/mechanical treatment is going to be 3 used. For the biological portion of the treatment, I 4 presume you would need to have it done indoors because 5 it is pretty difficult to -- to have any bacterial 6 growth at the temperatures of minus 60, minus 70. So 7 you are you planning to have a building specifically 8 dedicated for this biological treatment portion, and 9 how large of a building are we talking about? 10 Thank you. 11 THE CHAIR: Thank you. 12 Applicant, go ahead. 13 MR. ROY: Thank you, Mr. Chair. 14 So, Sergey, as you know, the -- we did not 15 complete the detailed design of the wastewater 16 treatment plant. It's -- a preliminary concept design 17 was submitted. However, your question is -- could be 18 answered clearly. 19 Daryl, you want to take over? 20 MR. BURKE: Yes. Thanks, Bhabesh. Daryl 21 Burke with EXP. 22 So to answer the -- the first portion of your 23 question there, Sergey, yes, absolutely, the entire 24 mechanical and biological portion of the treatment 25 system -- wastewater treatment system would be 26 contained within -- within a building, and the building</p>
<p style="text-align: right;">83</p> <p>1 would be temperature controlled. So we would see a -- 2 I would expect temperatures of a minimum of 15 degrees 3 Celsius in that space, which would be more than 4 adequate for the type of treatment technology that's 5 being proposed here. This treatment technology has 6 been used outdoors in southern locations within Canada, 7 so -- where temperatures do drop below freezing, below 8 zero degrees C, and it still is an effective treatment 9 technology, so -- however, in Resolute Bay, in the 10 building at temperatures of 15 degrees Celsius, there 11 would be no issues maintaining biological treatment. 12 To answer the second part of your question, I just 13 can't seem to put my hands on it right now, but there 14 is a conceptual drawing that's been done that shows the 15 building size, and I just can't seem to put my hands on 16 that drawing at the moment. If you would just let 17 me -- I can get back to you on that one. I know there 18 is a -- kind of a conceptional building plan that's 19 been developed, and I will find that and get that sized 20 for you. 21 MR. KUFLEVSKIY: Thank you, Tony. Yeah, you 22 can absolutely provide the answer later on during the 23 hearing. And I can maybe move to the next question. 24 So the next question would be about the 25 decommissioning plan for the pump house and the 26 Signal Hill water treatment plant. As it was mentioned</p>	<p style="text-align: right;">84</p> <p>1 on Slide 16, this decommissioning plan was submitted to 2 the Water Board. When I went through this plan, all I 3 saw was the actual buildings of the pump house and the 4 water treatment plant with the infrastructure within 5 the buildings, but there was no coverage or there was 6 no mention of the old intake lines or what is going to 7 be -- how the old intake lines are going to be 8 remediated. This is a very critical point. And the 9 question is whether the proponent is planning to update 10 the decommissioning plan to account for these items? 11 Thank you. 12 THE CHAIR: Thank you. 13 Applicant, go ahead. 14 MR. ROY: Thank you, Mr. Chair. 15 I think in the presentation one of the slides 16 shows that the -- the intake line from the Char Lake to 17 the existing pump station and the existing pump station 18 to the water plant, so this is the intake. So this 19 intake has to be decommissioned. Also, the outfall 20 from macerator unit to the sea -- that outfall pipe, 21 that also the -- part of the decommissioning. 22 So three components of the pipe system, the intake 23 from the Char Lake to the pump station, pump station to 24 the water treatment plant, and also the macerator 25 building to the outfall to the sea -- so three sections 26 of the pipe has to be decommissioned. A lot will be in</p>

<p style="text-align: right;">85</p> <p>1 pump station, macerator building, blue building. 2 So those are the pumps that has to be 3 decommissioned. 4 MR. KUFLEVSKIY: Thank you, Bhabesh. This 5 answers my Question Number 3. 6 And now I can move to Question Number 4. Question 7 Number 4 is about the wastewater treatment plant 8 design. So, basically, the new wastewater treatment 9 plant is going to be receiving sewage from both the 10 hamlet and the airport. Will you count the 11 influent characteristics from these -- both places when 12 designing the report? 13 Thank you. 14 THE CHAIR: Thank you. 15 Applicant, go ahead. 16 MR. ROY: Thank you, Mr. Chair. 17 I think the -- I did a presentation saying that 18 there's a limit of the wastewater coming from the truck 19 system and also coming from the -- to the system after 20 bleeding. So while the two systems with two different 21 quality mix together, and then the treatment process 22 will start. 23 Again, the -- I think this question was raised in 24 the last technical meeting as well, so I'm requesting 25 Daryl to explain it in detail. 26 Daryl, please.</p>	<p style="text-align: right;">86</p> <p>1 MR. BURKE: Yeah. Thanks, Bhabesh. Daryl 2 Burke here again, EXP. 3 Yes. We've accounted for both of the sites, both 4 the airport site and the townsite, and -- and we've 5 accounted for those in terms of both flow as well as 6 concentration of contaminants of BOD and TSS. That 7 being said, the existing treatment system is sized 8 that -- such that it can handle BOD concentration up to 9 110 milligrams per litre and the total suspended solids 10 of up to 125 milligrams per litre. 11 So it -- that would be much more concentrated than 12 what we would expect to see on a typical basis here due 13 to the bleed water flow and the dilution effect that 14 you get from that in your wastewater stream. However, 15 we -- we did want to make sure that system was sized 16 such that if there are future efforts to reduce the 17 bleed water that we don't put ourselves in a situation 18 where the concentration is -- is higher than the system 19 can handle. 20 We've also followed up with the manufacturers of 21 the proposed treatment technology and confirmed that it 22 can handle both the hydraulic capacity, which is a 23 concern because of that bleed water flow, but it can 24 also handle the influent concentrations that I just 25 mentioned. So anything up to those concentrations 26 would be acceptable, and we anticipate that we'll be</p>
<p style="text-align: right;">87</p> <p>1 well within those design parameters here in the hamlet, 2 especially given the bleed water flow. 3 I hope that answers your question. 4 MR. KUFLEVSKIY: Thank you, Daryl. This is 5 Sergey Kuflevskiy from the Water Board. This answers 6 my question partly. 7 So are you going to provide the actual chemical 8 parameters, the characteristics, something for us to 9 visualize what parameters we can expect? Because I 10 don't think the full characteristics has been provided 11 to date. It would be very nice for the Water Board to 12 see a visual, like a table, with all the parameters and 13 the expected characteristics. Thank you. 14 MR. BURKE: Okay. Yeah. Daryl -- Daryl 15 Burke here again. 16 In -- I don't know, Sergey, if you've seen, we did 17 a memo, technical memo, prepared by EXP. It was in 18 March of -- of 2020, and that was basically an update 19 to the previous design report that had been done in 20 2012. And we did provide the recommended -- there is a 21 table in there with recommended influent wastewater 22 characteristics for design. 23 As I mentioned, though, those are the -- the 24 recommended -- I guess, the recommended design 25 characteristics, not necessarily the estimated 26 concentrations of what you would maybe expect to see in</p>	<p style="text-align: right;">88</p> <p>1 the hamlet knowing that our design concentrations that 2 we've recommended are on the conservative side to allow 3 for future reductions in bleed water flow. 4 I'm not sure that we have -- well, I -- we have 5 done estimates of the wastewater characteristics that 6 we would expect to see with the bleed water flow 7 accounted for. I don't have those numbers in front of 8 me right at the moment, but they're well less than what 9 the influent design parameters are. 10 MR. KUFLEVSKIY: Thank you, Daryl. This is 11 Sergey. 12 If I remember correctly, that memo from March 2020 13 only accounted for the sewage coming from the hamlet, 14 and it did not account for the sewage portion coming 15 from the airport. So it wasn't a combined -- the 16 parameters were not from the combined sewage. Can you 17 confirm that, please. Thank you. 18 THE CHAIR: Thank you. 19 MR. BURKE: So, yeah. Daryl Burke here 20 again. 21 I'm just -- actually, I'm -- I'm looking through 22 that memo as -- as we're speaking right now, Sergey, 23 and I -- I do believe that we did account for both the 24 townsite and the airport site in those values. What I 25 would like to do, however, is -- the report that I have 26 in front of me is just a summary of, obviously, the</p>

<p style="text-align: right;">89</p> <p>1 design calculations that have been done at that point. 2 Since you've asked the question, though, I would like 3 to take the opportunity to go back through the design 4 calculations and confirm that. I -- I believe that it 5 has accounted for both sites at this time, but I will 6 go back through those calculations and double-check 7 that for you. 8 MR. KUFLEVSKIY: Yeah. Thank you, Daryl. 9 Yeah. It would be greatly appreciated. 10 Now, Question Number 5: On Slide 27, you provided 11 fecal coliform parameters, basically, fecal coliform 12 data, and from my understanding, this data is for the 13 pre-wastewater treatment construction. Did you -- or 14 do you have any estimates for the post-water -- 15 wastewater treatment plant construction for parameters 16 or not yet? 17 Thank you. 18 THE CHAIR: Thank you. 19 Applicant. 20 MR. ROY: Mr. Chair, I think the -- 21 we -- we was -- we were requested by ECCC to develop 22 the fecal coliform parameters based on the existing 23 effluent quality. So that we did. A memo was sent to 24 the Water Board. 25 But to answer to Sergey's question, I don't think 26 we prepare any kind of technical memo on the fecal</p>	<p style="text-align: right;">90</p> <p>1 coliform for the -- for new wastewater treatment plant, 2 and I'm not sure that we can provide this until the 3 detail design is finalized. 4 So, Daryl, you want to add anything? 5 MR. BURKE: Yeah. 6 MR. ROY: Daryl? 7 MR. BURKE: Daryl Burke here, EXP. 8 I -- I do agree with you, Bhabesh. I think the 9 intent was to try to help define a limit. If I -- I 10 understand correctly what we were supposed to have 11 provided was to help define a -- you know, a discharge 12 limit for fecal coliforms as opposed to necessarily 13 trying to define what the influent concentration was 14 expected to be. I know we did do some of that. 15 Tony, I might ask you just to maybe jump in there 16 if you feel I'm saying something incorrectly here, 17 but -- 18 MR. WHALEN: Yeah, I can. Tony Whalen 19 speaking. 20 Yeah. So we -- we essentially prepared a 21 technical memo to develop fecal coliform limits to be 22 used prior to construction of the wastewater treatment 23 plant. So, yeah, we did not look at establishing any 24 sort of limits on fecal coliform once the treatment 25 plant is in place. So, yeah, that's -- you were 26 correct, Daryl. That's -- and that's pretty much all I</p>
<p style="text-align: right;">91</p> <p>1 can say at this point. We -- we haven't developed any 2 of those numbers as of yet until we finalize the design 3 of the wastewater treatment plant and effluent 4 characteristics. 5 Thank you, Mr. Chair. 6 THE CHAIR: Thank you. 7 Go ahead, Staff. 8 MR. KUFLEVSKIY: Thank you, Tony. Thank you, 9 Daryl. Thank you, Bhabesh. This answers my questions. 10 And if you can provide that information that you 11 promised to provide earlier, that would be great. But 12 this answers all of my questions. Thank you. 13 THE CHAIR: Thank you. Okay. Thank you, 14 Staff. 15 Now, I'd like to ask the Panel members, do you 16 have -- yeah, we do have a question regarding ... 17 Nunavut Water Board Questions the Government of 18 Nunavut, Community Government Services 19 MR. SOWDLOOAPIK: Thank you, Mr. Chairman. 20 My name is Sakaisie Sowdloopik. I'm with the 21 Water Board. Okay. Again, my name is Sakaisie. I'm 22 with the Water Board. Thank you for all the 23 presentations throughout the morning and this 24 afternoon. 25 In many of the presentations today, I, myself, 26 being very interested about a place called</p>	<p style="text-align: right;">92</p> <p>1 "Char Lake" -- by the way, I'm fisherman back home. 2 Surrounding the Char Lake there seems to be many plans 3 for the future for up to 2047, from 2020, and I'd like 4 to know if this is very large lake, first of all, or if 5 there -- secondly, Mr. Chairman, if there is some 6 species in that lake, such as fish or other ecosystem 7 in the lake. And, thirdly, I am very interested from 8 the community members if there is traditional knowledge 9 [OTHER LANGUAGE SPOKEN] surrounding that lake. 10 Thank you, Mr. Chairman. 11 THE CHAIR: Thank you, Panel Member. 12 Applicant. 13 MR. ROY: Thank you. Thank you, 14 Mr. Chair. 15 You're asking -- one of the member asking for -- 16 is there any other lake? My answer is yes. 17 Technically there are two lakes. One is called the 18 "airport lake", and another is called "Char Lake". The 19 airport lake many years ago was abandoned. The 20 airport -- we had a pump station and the airport lake, 21 which was used that supply water in the airport area. 22 That pump station is even done. The pipes -- 23 everything is there, but we are not using it. And same 24 city, next to the -- the runway, the water quality was 25 considered contaminated, so we don't use that lake 26 anymore.</p>

<p style="text-align: right;">93</p> <p>1 So we have only the one lake, which is Char Lake.</p> <p>2 Now, you are asking for the fish habitat and the</p> <p>3 capacity. We are using a fish screen. Fish might be</p> <p>4 there. We don't have any kind of fish habitat study on</p> <p>5 the lake, but there is a fish screen at the end of the</p> <p>6 intake, and that intake is -- this contained --</p> <p>7 considering where is the fish, considering there is a</p> <p>8 fish, and fish cannot go inside the pipe. That's why</p> <p>9 DFO, they have a special regulation to use the fish</p> <p>10 screen at the end of the intake. So we have the screen</p> <p>11 protecting. No fish can come inside the pipe.</p> <p>12 Regarding the capacity -- so this is a hard</p> <p>13 question -- we have a hydrology test study and are --</p> <p>14 are -- done two years ago, so we know the</p> <p>15 sustainability of the lake, what is the maximum</p> <p>16 capacity of the lake. And we -- we did that study,</p> <p>17 and, based on that, we know that -- how long the -- our</p> <p>18 present system can run. In one of the presentation, we</p> <p>19 indicated that 2040 -- after, the present bleeding</p> <p>20 system will be challenging because we should not go to</p> <p>21 extract more water, what is needed in 2040, because the</p> <p>22 lake has not an enough capacity to feed the entire</p> <p>23 consumption volume if the bleeding water's spent.</p> <p>24 So in order to -- in answer to your question, our</p> <p>25 water permit we requested for 2040, and we are</p> <p>26 comfortable, and we have sufficient water in the lake</p>	<p style="text-align: right;">94</p> <p>1 to supply water to our demand.</p> <p>2 Tony, you want to add something? This is your --</p> <p>3 another technical memo.</p> <p>4 MR. WHALEN: Tony Whalen speaking.</p> <p>5 No, Bhabesh. I think -- I believe you covered</p> <p>6 everything in there. Yeah. I think you addressed</p> <p>7 everything in there.</p> <p>8 Thank you.</p> <p>9 MR. ROY: Thank you, Tony. Thank you.</p> <p>10 THE CHAIR: Thank you.</p> <p>11 Staff, go ahead.</p> <p>12 MS. AUTUT: Thank you, Mr. Chair.</p> <p>13 Stephanie Autut, Nunavut Water Board.</p> <p>14 Thank you, Sakaisie, for the question. Tonight is</p> <p>15 also the community session where we're hoping to have</p> <p>16 residents from the community attend to hear similar</p> <p>17 presentations, so it would be -- it would be acceptable</p> <p>18 to, again, tonight ask that question directly to the</p> <p>19 community members and generate some discussion around</p> <p>20 your traditional knowledge question.</p> <p>21 THE CHAIR: Okay. Thank you. I think we</p> <p>22 are done with the Application [sic] -- questioning the</p> <p>23 Application with their presentation at the moment.</p> <p>24 So before we are moving on to interveners, I'd</p> <p>25 like to get a break. 15-minute break.</p> <p>26 (ADJOURNMENT)</p>
<p style="text-align: right;">95</p> <p>1 THE CHAIR: So now we -- we turn to a</p> <p>2 presentation by interveners. I remind interveners that</p> <p>3 before they begin their presentation our legal counsel</p> <p>4 need you to swear or affirm and verify the materials</p> <p>5 you will be presenting and marketing as exhibit.</p> <p>6 Teresa, please proceed with the procedural</p> <p>7 matters.</p> <p>8 MS. MEADOWS: Thank you, Mr. Chair. Teresa</p> <p>9 Meadows, legal counsel for the Nunavut Water Board.</p> <p>10 So it's my understanding that the next presenters</p> <p>11 will be Crown-Indigenous Relations and Northern</p> <p>12 Affairs, so if I can get you to come up to the</p> <p>13 interveners' table, please. If I can get the witnesses</p> <p>14 to state and spell your name for the record, please.</p> <p>15 MR. OKONKWO: Thanks, Teresa. So my name is</p> <p>16 Godwin Okonkwo, so G-O-D-W-I-N O-K-O-N-K-W-O.</p> <p>17 MS. FORTE: My name is Sarah Forte,</p> <p>18 S-A-R-A-H F-O-R-T-E.</p> <p>19 MS. MEADOWS: Thank you. Teresa Meadows,</p> <p>20 legal counsel for the Nunavut Water Board.</p> <p>21 Do the witnesses wish to be sworn or affirmed?</p> <p>22 MR. OKONKWO: We can be affirmed.</p> <p>23 GODWIN OKONKWO, SARAH FORTE, Affirmed</p> <p>24 MS. MEADOWS: Teresa Meadows, legal counsel</p> <p>25 for the Nunavut Water Board.</p> <p>26 Mr. Chair, I have two hard copy presentation</p>	<p style="text-align: right;">96</p> <p>1 materials that I will be marking as the next two</p> <p>2 exhibits in this public hearing, being a copy of the</p> <p>3 presentation that Crown-Indigenous Relations and</p> <p>4 Northern Affairs is about to present in English and</p> <p>5 Inuktitut in one version, and then I also have the</p> <p>6 summary of Crown-Indigenous Relations and Northern</p> <p>7 Affairs Canada's review of the water licence</p> <p>8 application, and I propose to file those as the next</p> <p>9 two exhibits in this public hearing. And those are my</p> <p>10 procedural matters, Mr. Chair.</p> <p>11 EXHIBIT 7 - Hamlet of Resolute Bay utilidor</p> <p>12 renewal application for Water Licence</p> <p>13 3AM-RUT--- (English/Inuktitut)</p> <p>14 EXHIBIT 8 - Summary of Crown-Indigenous and</p> <p>15 Northern Affairs Canada review of Water</p> <p>16 Licence Application 3AM-RUT---</p> <p>17 (English/French/Inuktitut)</p> <p>18 THE CHAIR: Thank you, Teresa.</p> <p>19 So Crown-Indigenous Relations and Northern</p> <p>20 Affairs, go ahead with your presentation.</p> <p>21 Presentation by Crown-Indigenous Relations and Northern</p> <p>22 Affairs Canada</p> <p>23 MR. OKONKWO: Thank you, Mr. Chair.</p> <p>24 So good day, everyone. My name is Godwin Okonkwo.</p> <p>25 I am the manager of watering resources from</p> <p>26 Crown-Indigenous Relations and Northern Affairs Canada.</p>

<p style="text-align: right;">97</p> <p>1 I would like to thank the Nunavut Water Board for this 2 opportunity to make a presentation and for the 3 intervention regarding the Government of Nunavut, 4 Community and Government Services' application to renew 5 and amend its 3BM-RUT1520 water licence as a Type "A" 6 water licence. 7 I am joined today by Sarah Forte, the water 8 management specialist. She's the lead on this file. 9 So if you have any questions, please send them to her. 10 Just kidding. 11 On behalf of Crown-Indigenous Relations and 12 Northern Affairs Canada, I would like to acknowledge 13 the Nunavut Water Board's work in facilitating this 14 licence application review process and the Government 15 of Nunavut, Community and Government Services for their 16 efforts to respond to our questions and concerns. 17 So as we do this presentation, I'd just like to 18 state that I will do parts of the presentation, and 19 Sarah Forte will do other parts of the presentation. 20 Throughout this presentation, I will refer to 21 Crown-Indigenous Relations and Northern Affairs Canada 22 as "the department", and the acronym "CIRNAC" is used 23 on the slides, and I will refer to the Government of 24 Nunavut, Department of Government -- Community and 25 Government Services as "the Applicant". 26 So I will start with a brief overview of</p>	<p style="text-align: right;">98</p> <p>1 Crown-Indigenous Relations and Northern Affairs 2 Canada's responsibilities with respect to the licence 3 application. I will also list contributions that have 4 been made by the department during this process. The 5 topics of the technical review follow the list of 6 issues identified by the Board in their prehearing 7 conference decision. In the course of this process, 8 the department raised nine technical comments, which 9 have been assigned to different issues for discussions. 10 The issues identified have been resolved through 11 discussions at the technical meeting and updated 12 materials submitted by the Applicant. 13 And so the issue areas are, Number 1, scope and 14 term of licence, compliance, water supply, wastewater 15 treatment, management plans and reports, monitoring, 16 closure and reclamation planning. 17 So the department has a broad mandate for 18 comanagement of freshwater resources and the management 19 of Crown land in Nunavut under the Act, Regulations, 20 and the Nunavut Agreement listed on the slides. The 21 department administers and enforces regulatory 22 authorizations that pertain to Nunavut's Crown land and 23 freshwater resources. Now, the department participates 24 in water licence processes administered by the Nunavut 25 Water Board, along with other interested parties 26 providing technical advice and expertise for the</p>
<p style="text-align: right;">99</p> <p>1 Board's consideration. It's important to note, also, 2 that the department also issues land-use permits and 3 lessees for Crown land. 4 To date, the department has made full 5 contributions in the course of the Government of 6 Nunavut, Community and Government Services water 7 licence application review. At the beginning of this 8 application process, the department did a preliminary 9 completeness review, and a written memorandum was 10 provided on March 26, 2020. 11 Following the completeness review, the department 12 conducted a technical review of the application. The 13 comments and recommendations were provided for the 14 Board's -- the Nunavut Water Board's consideration in a 15 written memorandum on June 12th, 2020. 16 The department participated in a technical meeting 17 and prehearing conference on July 14th, 2020. 18 The department also provided a final written 19 submission to the Nunavut Water Board on 20 September 24th, 2020. 21 So on the first issue, which is on the scope and 22 term of the licence, the department agrees with the 23 changes to the scope of the licence described in the 24 prehearing conference decision report list of issues. 25 It covers new infrastructure elements to be added to 26 the licence and retains those which have not yet been</p>	<p style="text-align: right;">100</p> <p>1 decommissioned. 2 During the technical meeting, there were 3 discussions on the possibility of the Applicant 4 requesting a licence term longer than ten years. On 5 August 4th, 2020, the Applicant submitted an updated 6 renewal application requesting a 20-year licence term. 7 The department supports this request. We understand 8 that during this 20 years there will likely be 9 amendments, including the potential incorporation of 10 facilities currently licensed under 3BM-RES2025, which 11 covers the solid waste facilities. 12 At this point, I would like to call on Sarah to 13 carry on with some more part -- technical parts of the 14 presentation. 15 Thank you, Mr. Chair. 16 THE CHAIR: Thank you. 17 MS. FORTE: So the recently expired 18 licence for the Resolute Bay utilidor, which was 19 3BM-RUT1520, had several conditions which were not 20 realized during the term of the licence. The 21 department is of the opinion that they are being 22 addressed during this renewal application process. The 23 conditions can be grouped into four topics. 24 Monitoring -- the first is monitoring water quantity at 25 the intake and the outfall, and this is to be addressed 26 by installing flow meters. Our understanding is that</p>

<p style="text-align: right;">101</p> <p>1 there's already one that has been installed at the 2 macerator building, and, just earlier, we were 3 discussing the installation of the one at the pump 4 house. And there's been a commitment to that, so we're 5 satisfied, along with a timeline. 6 Another topic is the annual authorized water use. 7 The previous licence authorized the use of 8 120,000 cubic metres a year, which was not enough to 9 meet community needs, and with this application, an 10 increased amount has been requested, and that's a 11 positive step. 12 The third topic was a site-specific study for the 13 determination of the fecal coliform limit, which was 14 submitted on September 2nd of this year, and we'd like 15 to flag an error in referencing in our final written 16 submission. We had referred to this as "Licence 17 Condition Part C, Item 4" when, in fact, it is "Part D, 18 Item 4". So that was a mistake that might make reading 19 our final submission a little bit more complicated. 20 And the fourth condition that hadn't been realized 21 was updated operation and maintenance manuals. One for 22 the -- the utilidor has been provided in the course of 23 this application, and a timeline, based on the 24 commissioning of new infrastructure, was agreed to for 25 outstanding manuals, and the -- like, the ones for the 26 pump house and water treatment plant.</p>	<p style="text-align: right;">102</p> <p>1 So the third topic in the list of issues was the 2 water supply, and the hamlet's water source is 3 Char Lake, and a pump house on this lakeshore is used 4 to draw water, which is piped to Signal Hill where 5 there's a water treatment plant and storage tank. 6 Water's distributed through the utilidor system built 7 in 1978 and upgraded in the last five years. Water 8 delivery to the airport sector is through truck 9 services. 10 The department had three technical comments 11 related to water supply. The first was the quantity of 12 water requested, and I earlier asked for clarification, 13 and -- and -- and we're satisfied now the -- on the 14 quantity of water being requested and understand it to 15 be unchanged at 216,528 cubic metres per year. 16 Work on upgrading the pump house and water intake 17 started last year, continued this year, and we 18 understand will be complete next year. The department 19 had three recommendations regarding this work: The 20 first was asking for an environmental management plan 21 addressing concerns about potential environmental 22 impacts, including the flushing of total suspended 23 solids and hydrocarbon contaminated soils into 24 Char Lake during the work. It was provided on 25 August 12th and satisfied our concerns, although we 26 understand that Environment and Climate Change Canada</p>
<p style="text-align: right;">103</p> <p>1 have outstanding concerns and would like to see it 2 updated, and we see -- we support their request. 3 We also asked for a decommissioning and 4 remediation plan for the old pump house. In their 5 June 29th response, the Applicant committed to 6 providing a plan 60 days prior to starting 7 decommissioning work; however, on September 25th, the 8 applicant provided a decommissioning plan for both the 9 pump house and the water treatment plant. This was 10 submitted after we had shared our final written 11 comments with the Board, so we haven't had a chance to 12 give our technical review on this, and we'd like to 13 flag that this plan does not cover some of the elements 14 that are necessary for a reclamation plan, including 15 what condition the site would be left in and, as Sergey 16 mentioned earlier, the -- the intake and -- and how all 17 of the old building and its foundation might be 18 removed -- or left there. 19 And our third comment regarding the construction 20 had to do with ensuring the integrity of the water 21 intake pipe insulation during construction, and the 22 applicant committed to considering constructions [sic] 23 designs to ensure integrity. 24 And, finally, the last point on this slide has to 25 do with leaks in the laterals of the utilidor. So 26 as -- as discussed earlier, the utilidor system was</p>	<p style="text-align: right;">104</p> <p>1 replaced in 2016, which is relatively recently, and -- 2 and leaks aren't a big issue; however, during a meeting 3 in the community in -- in December of last year, 4 leaks -- individuals reported leaks from laterals 5 connecting to homes and buildings, and the occupants 6 did not know how to get -- who to contact to get the 7 leaks fixed. The laterals are not the responsibility 8 of the contractor servicing the utilidor, and in the 9 course of the technical meeting, the Applicant 10 clarified the different organizations that community 11 members could contact to raise a concern or ask for 12 help. And at the technical meeting, Steve Piercey from 13 the Hamlet indicated he would make a public service 14 announcement to share the information with the 15 community. 16 Okay. All right. On to wastewater treatment: 17 Currently the wastewater collected by the utilidor 18 passes through a macerator to remove solids before 19 being discharged into the ocean. Construction of a 20 neuro-wastewater treatment plant is planned for 2024. 21 The new plant would have the capacity to treat sewage 22 from town, as well as sewage generated in the airport 23 sector, which is currently sent to a sewage lagoon 24 covered by Water Licence 3BM-YRB1621. 25 The department had comments regarding the plans 26 for the new wastewater treatment plant, which is at the</p>

<p style="text-align: right;">105</p> <p>1 predesign stage. Treatment targets for the plant were 2 discussed at the technical meeting. The Applicant 3 committed to submitting a detailed design brief and 4 plans for the plant at least 60 days prior to 5 construction, which would satisfy our concerns. The 6 department recommends that the Nunavut Water Board 7 consider including this as a condition in the new 8 licence. 9 And then I'll pass it back on to Godwin. 10 MR. OKONKWO: Thanks, Sarah. So this is 11 Godwin again, Crown-Indigenous Relations and Northern 12 Affairs Canada. 13 So our fifth comment was on the management plan 14 and reports. Management plans and operations and 15 maintenance manuals describe concepts and strategies -- 16 how concepts and strategies will be implemented. The 17 review allows us to understand what actions will be 18 taken on the ground to make sure things work as planned 19 to protect water. 20 The department had three technical comments 21 related to plans and manuals. Number 1: Operation and 22 maintenance manuals for the infrastructure were missing 23 from the application, in part, because all system 24 components were or are undergoing upgrades. The 25 department recommended plans be provided and is 26 satisfied with the timelines discussed.</p>	<p style="text-align: right;">106</p> <p>1 For the water treatment plant, the Applicant 2 committed to providing an operation and maintenance 3 manual for the wastewater treatment plant and pump 4 house after commissioning. The department recommends 5 that the Nunavut Water Board consider including this as 6 a condition in a new water licence specifying a 7 timeline. 8 The Applicant had also committed to providing a 9 manual for the utilidor once the upgrades were 10 completed, including the 500-metre outfall line into 11 the ocean. The Applicant already provided this manual 12 on September 25th, 2020, which is really encouraging to 13 see. The department's comment on the submitted manual 14 is that it is a significant improvement over previously 15 submitted material because it details how to operate 16 and maintain the utilidor system. However, we note 17 that the cover page does not reflect the date of the 18 latest update. We're expecting this manual would be 19 updated again after the outfall line to the ocean is 20 commissioned, unless operation information is included 21 in another manual. 22 Also, a risk has been identified in the macerator 23 building, and the department's concerns were satisfied 24 by the submission of Resolute Bay sewage macerator 25 facility operations and maintenance procedures on 26 August 4, 2020. A further memo on the topic was</p>
<p style="text-align: right;">107</p> <p>1 provided by the Applicant on September 25th, 2020. 2 Another plan, the spill contingency plan, included 3 with the application material had certain sections 4 which did not seem to be adapted for Resolute Bay. The 5 Applicant addressed this in an updated plan submitted 6 on June 29, 2020. The plan was resubmitted on 7 September 25th, 2020, with a different cover page. 8 Another plan is the quality assurance and quality 9 control plan. So some deficiencies were noted in the 10 quality assurance and quality control plan that was 11 submitted with the application. These were corrected 12 to the department's satisfaction in an updated version 13 submitted on June 29th, 2020. This same plan was 14 resubmitted on October 19th with greatly improved 15 formatting and some positive additions, like proper 16 appendices. 17 Okay. So our sixth comment was on monitoring. 18 The recently expired licence, the current licence, 19 requires monthly samples at the Station RUT-2, the 20 sewage outfall to the ocean. Several years of data are 21 available and indicate the quality is not very 22 variable, and it is possible to identify outliers with 23 the current data. Quarterly sampling might be 24 sufficient to flag any sufficient change and would 25 facilitate easier compliance with licensed terms. The 26 Applicant agrees to this change, so CIRNAC is</p>	<p style="text-align: right;">108</p> <p>1 recommending that the Board considers modifying 2 sampling requirements at RUT-2 until a water treatment 3 plant is built. 4 Another comment that we had was on closure and 5 reclamation planning. So the infrastructures being 6 decommissioned will need to be reclaimed, including the 7 macerator building and the blue building beside it, the 8 old pump station, the old intake line, and the old 9 outfall line. The applicant has committed to providing 10 these plans should the requirement be in the renewed 11 water licence. The department recommends that the 12 Nunavut Water Board include provision of these 13 reclamation plans as a condition in the new water 14 licence. 15 About four slides ago we mentioned that the 16 Applicant submitted a decommissioning plan for the 17 Char Lake pump house and Signal Hill water treatment 18 plant, which is an amazing first step; however, we 19 mentioned that they had deficiencies with the 20 reclamation -- the decommissioning plan. And, as 21 stated by Sarah, the plan should have at least 22 something put in it to identify what the -- how the 23 Applicant hopes to leave the site after 24 decommissioning. So reclamation, we would hope, is -- 25 you're taking the environment back to what it was 26 before and not just removing stuff from it.</p>

<p style="text-align: right;">109</p> <p>1 CIRNAC supports the Government of Nunavut, 2 Community Government Services' renewal application and 3 recommends that it be accepted with due considerations 4 given to our comments. Qujannamiik. 5 THE CHAIR: Thank you. Okay. Thank you 6 for your presentation. 7 Does the GN-CGS have any questions to the 8 interveners? 9 Stephanie, go ahead. 10 MS. AUTUT: Thank you, Mr. Chair. 11 Stephanie Autut, Nunavut Water Board. 12 Bhabesh, the Chair is directing a question to you, 13 whether or not you have questions for CIRNAC at this 14 time. We believe you may still be muted. If you could 15 unmute your phone, please. Thank you. 16 MR. ROY: Yeah. Mr. Chair, I don't have 17 any question, but if you allow me, I just do a 18 clarification. Hello? 19 THE CHAIR: Hello. Teresa -- Teresa have 20 to speak. 21 MS. MEADOWS: Thank you, Mr. Chair. Teresa 22 Meadows, legal counsel for the Nunavut Water Board. 23 So I believe that -- correct me if I'm wrong, 24 Mr. Roy, but that you wanted to make a clarification or 25 a -- of -- of either something that Crown-Indigenous 26 Relations and Northern Affairs Canada said, or is it a</p>	<p style="text-align: right;">110</p> <p>1 clarification with respect to what was previously said 2 by the Applicant? 3 MR. ROY: No. Thank you, Teresa and 4 Mr. Chair. 5 My clarification to the presentation of CIRNAC, so 6 if you allow me -- I don't have a question, but I just 7 make a clarification so that the audience -- it's easy 8 to understand how the system would be working inclusive 9 until the new system onboard. 10 MS. MEADOWS: Thank you, Mr. Chair. Teresa 11 Meadows, legal counsel for the Nunavut Water Board. 12 Thank you for that clarification. Mr. Chair has 13 indicated that you can proceed. 14 Comment by the Government of Nunavut, Community 15 Government Services 16 MR. ROY: Thank you, Mr. Chair. 17 Thank you for the presentation and acceptance of 18 the documents submitted and the -- your analysis of 19 different issues and so on. Thank you, CIRNAC. 20 So my clarification is the -- we are running 21 the -- the pump station, and we are going to build and 22 commissioning a new pump station within the parallel 23 connection. So we cannot go for decommissioning until 24 we see the new pump station is functioning to the 25 satisfaction. So once we see a new pump -- the new 26 pump station is functioning good, and then we are going</p>
<p style="text-align: right;">111</p> <p>1 to decommissioning of the intake line of the old pump 2 station. 3 So, again, the clarification is the same way at 4 the outfall -- the macerator and the outfall line are 5 different from the new wastewater treatment plant and 6 the outfall line. So while the new wastewater 7 treatment plant in built, the same way, we will test 8 the new plant; we see how it works. And we have to 9 make sure the new water -- wastewater treatment plant 10 is working to the satisfaction, and then we'll 11 disconnect the line, and we decommission the macerator 12 building, blue building, and the outfall line. And the 13 same way, once we are accepting the sewage from the -- 14 the airport sewage lagoon, then -- to the wastewater 15 treatment plant and it is functioning to the 16 satisfaction, that building -- we'll be considering to 17 start decommissioning of the airport sewage lagoon. 18 So this is the -- the transition and the 19 replacement, new facility by the -- old facility by the 20 new facility. So this is the course of action we have 21 to continuing because system cannot be stopped for one 22 second. System has to go. So this is why we are 23 running the system in a way -- we are not going to 24 decommission the old facility just like this until the 25 new facility will be functioning to the satisfaction. 26 Thank you, Mr. Chair.</p>	<p style="text-align: right;">112</p> <p>1 THE CHAIR: Okay. Thank you. Thank you, 2 [sic] Roy. Okay. That was -- that wasn't really a 3 question, so -- clarification. So thank you. 4 And I'd like to ask the -- Environment and Climate 5 Change, do you have any questions or comments to the 6 intervention from CIRNAC? 7 MS. GRAHAM: This is Anna Graham, 8 Environment and Climate Change Canada. We have no 9 questions at this time. 10 THE CHAIR: Thank you. 11 Does the Nunavut Water Board staff have any 12 questions or comments? 13 MS. AUTUT: Thank you, Mr. Chair. 14 Stephanie Autut, Nunavut Water Board. 15 The staff have no questions at this time. 16 Thank you. 17 THE CHAIR: Thank you. 18 Does the Panel Members have any questions or 19 comments? Okay. I get that there's none. 20 Thank you, CIRNAC, for your presentation. 21 So continue on with the intervention. Now I'd 22 like to call upon Environment and Climate Change Canada 23 to have a -- to present your presentation. So legal 24 counsel will take over for your swear-in. 25 MS. MEADOWS: Thank you, Mr. Chair. Teresa 26 Meadows, legal counsel for the Nunavut Water Board.</p>

<p style="text-align: right;">113</p> <p>1 If I can have the witnesses state and spell their 2 name for the record, please. 3 MS. GRAHAM: Anna Graham, Environment and 4 Climate Change Canada. A-N-N-A G-R-A-H-A-M. 5 MS. TOBIN: And Meagan Tobin, M-E-A-G-A-N 6 T-O-B-I-N. 7 MS. MEADOWS: Thank you. Teresa Meadows, 8 legal counsel for the Nunavut Water Board. 9 If I can have the witnesses affirm. When I 10 complete the statement, if you can say "I affirm" and 11 give your name for the record, that would be 12 appreciated. 13 ANNA GRAHAM, MEAGAN TOBIN, Affirmed 14 MS. MEADOWS: Thank you. Teresa Meadows, 15 legal counsel for the Nunavut Water Board. 16 Mr. Chair, I have two exhibits to file in respect 17 of the evidence about to be given by Environment and 18 Climate Change Canada, and that consists of their 19 presentation materials in English and in Inuktitut, and 20 I will file those as the next two exhibits in the 21 public hearing. And those are my procedural matters, 22 Mr. Chair. 23 EXHIBIT 9 - PowerPoint presentation from 24 Environment and Climate Change Canada to the 25 Nunavut Water Board respecting the 26 Resolute Bay Type "A" Water Licence Renewal</p>	<p style="text-align: right;">114</p> <p>1 and Amendment (English) 2 EXHIBIT 10 - PowerPoint presentation from 3 Environment and Climate Change Canada to the 4 Nunavut Water Board respecting the 5 Resolute Bay Type "A" Water Licence Renewal 6 and Amendment (Inuktitut) 7 THE CHAIR: Thank you, Teresa. 8 So Environment and Climate Change Canada, you may 9 go ahead with your presentation. 10 Presentation by Environment and Climate Change Canada 11 MS. GRAHAM: Thank you, Mr. Chair. 12 Good afternoon, everyone. My name is Anna Graham. 13 I am an environmental assessment coordinator with 14 Environment and Climate Change Canada. And with me, 15 who just spoke as well, is our water quality analyst, 16 Meagan Tobin. 17 I would like to thank the Nunavut Water Board for 18 this opportunity to make an intervention for this water 19 licence, as well as to Crown-Indigenous Relations 20 Northern Affairs Canada, the Government of Nunavut, 21 Community and Government Services, and the Hamlet of 22 Resolute Bay. 23 I will start by presenting the department's 24 mandate and briefly touch on the Act and Regulations 25 that are relevant to Environment and Climate Change 26 Canada and which guide a review of the current</p>
<p style="text-align: right;">115</p> <p>1 application. Following that, Meagan will outline the 2 comments and recommendations provided in our final 3 submission regarding the application for a Type "A" 4 water licence. 5 Environment and Climate Change Canada's mandate is 6 to preserve and enhance the quality of the natural 7 environment, including water, air, and soil quality. 8 Wait one moment. 9 Our mandate is also to conserve Canada's renewable 10 resources, including migratory birds; conserve and 11 protect Canada's water resources; forecast daily 12 weather conditions, so meteorology; enforce those 13 regulations -- 14 THE CHAIR: Just hold on a second. 15 We have to negotiate here at the moment. 16 Staff. 17 MS. AUTUT: Thank you, Mr. Chair. 18 Stephanie Autut, Nunavut Water Board. 19 Mr. Chair, we're experiencing some technical 20 difficulty with getting the presentation up on the 21 screen, so if we could take a short five-, ten-minute 22 break to -- to resolve that matter. I'd encourage the 23 Panel and -- and members of the audience to help 24 themselves to a coffee or a -- or a juice box or 25 something, but we'll be back in a few minutes with -- 26 with the presentation. Thank you.</p>	<p style="text-align: right;">116</p> <p>1 THE CHAIR: Okay. Yeah, we'll -- we'll do 2 that. Thank you. 3 (ADJOURNMENT) 4 THE CHAIR: Okay. Environment and Climate 5 Change Canada, you may go ahead now with your 6 presentation. 7 MS. GRAHAM: Thank you, Mr. Chair. Anna 8 Graham, Environment and Climate Change Canada. 9 I will continue where I left off before the break. 10 I was speaking to Environment and Climate Change 11 Canada's mandate. 12 Our mandate is to preserve and enhance the quality 13 of the natural environment, including water, air, and 14 soil quality; to conserve Canada's renewable resources, 15 including migratory birds; to conserve and protect 16 Canada's water resources; to forecast daily weather 17 conditions; to enforce those regulations; and to 18 coordinate environmental policies and programs for the 19 federal government. This mandate is governed by 20 several Acts and Regulations, including the Department 21 of the Environment Act, the Canadian Environmental 22 Protection Act, the Pollution Prevention Provisions of 23 the Fisheries Act, the Migratory Birds Convention Act, 24 and the Species-At-Risk Act. 25 I will now pass this presentation over to my 26 colleague, Meagan, for the discussion of our technical</p>

<p style="text-align: right;">117</p> <p>1 comments.</p> <p>2 MS. TOBIN: Thank you. So I will now</p> <p>3 speak to the comments that Environment and Climate</p> <p>4 Change Canada provided in our final submission.</p> <p>5 So the first comment related to the new wastewater</p> <p>6 treatment plant, specifically Environment and Climate</p> <p>7 Change Canada, have requested additional details</p> <p>8 relating to treatment targets for the new treatment</p> <p>9 plant. As well, we were also looking for details on</p> <p>10 future toxicity testing, validation, and effluent data.</p> <p>11 In response, the applicant has provided a memo</p> <p>12 indicating that the plant will be designed to be</p> <p>13 capable of meeting the limits of the federal southern</p> <p>14 Wastewater Systems Effluent Regulations and has made a</p> <p>15 commitment for toxicity testing and submission of</p> <p>16 effluent data. ECCC considers these comments to be</p> <p>17 resolved.</p> <p>18 Next slide, please.</p> <p>19 As part of the submission for renewal, the</p> <p>20 Applicant referenced fecal coliform studies that were</p> <p>21 not initially provided for review, and therefore ECCC</p> <p>22 recommended that this information be made available to</p> <p>23 reviewers. The Applicant has provided this analysis,</p> <p>24 and Environment and Climate Change Canada has no</p> <p>25 further comments; therefore, this comment is considered</p> <p>26 to be resolved.</p>	<p style="text-align: right;">118</p> <p>1 In relation to management plans, Environment and</p> <p>2 Climate Change Canada made recommendations regarding</p> <p>3 the quality assurance and quality control program to</p> <p>4 include trip blanks in the program. We also identified</p> <p>5 several errors in the quality assurance and quality</p> <p>6 control plan, as well as the spill contingency plan.</p> <p>7 In response, the Applicant has provided updated plans</p> <p>8 incorporating our recommendations and addressing all of</p> <p>9 the errors. Environment and Climate Change Canada</p> <p>10 considers these comments to be resolved.</p> <p>11 In response to the technical meeting, the</p> <p>12 Applicant provided an updated environmental management</p> <p>13 plan for the Char Lake pump house and Signal Hill water</p> <p>14 treatment plant construction. This plan includes</p> <p>15 implementing mitigation measures for erosion and</p> <p>16 sedimentation; however, Environment and Climate Change</p> <p>17 Canada noted that no associated water quality</p> <p>18 monitoring in Char Lake had been proposed and therefore</p> <p>19 recommended that turbidity monitoring be completed</p> <p>20 during in-water works.</p> <p>21 Earlier in this hearing, clarification was</p> <p>22 provided by the Applicant on their turbidity monitoring</p> <p>23 associated with in-water construction, and, therefore,</p> <p>24 Environment and Climate Change Canada considers this</p> <p>25 comment to be resolved, pending this turbidity</p> <p>26 monitoring being described in the environmental</p>
<p style="text-align: right;">119</p> <p>1 management plan.</p> <p>2 I want to thank you for the opportunity to</p> <p>3 participate in this process, and we will now take any</p> <p>4 questions.</p> <p>5 Thank you, Mr. Chair.</p> <p>6 THE CHAIR: Okay. Thank you.</p> <p>7 So questioning interveners to -- start with</p> <p>8 Applicants, CGS, if you have questions or comment.</p> <p>9 MR. ROY: Thank you, Mr. Chair. No, I</p> <p>10 don't have any question or comments. Thank you very</p> <p>11 much.</p> <p>12 THE CHAIR: Thank you.</p> <p>13 Crown-Indigenous, do you have any questions?</p> <p>14 MR. OKONKWO: Thank you, Mr. Chair. This is</p> <p>15 Godwin, Crown-Indigenous Relations and Northern</p> <p>16 Affairs. We have no questions for ECCC.</p> <p>17 THE CHAIR: Thank you.</p> <p>18 Water Board Staff, any questions?</p> <p>19 MS. AUTUT: Thank you, Mr. Chair.</p> <p>20 Stephanie Autut, Nunavut Water Board. We have no</p> <p>21 questions at this time, Mr. Chair.</p> <p>22 THE CHAIR: Thank you.</p> <p>23 Panel Members, any questions? Okay. There's</p> <p>24 none. Thank you.</p> <p>25 Thank you, ECCC, for your presentation.</p> <p>26 MS. GRAHAM: Thank you, Mr. Chair.</p>	<p style="text-align: right;">120</p> <p>1 THE CHAIR: Okay. We may take a recess</p> <p>2 for -- for now or -- because we have to come back here</p> <p>3 at 7:00 tonight for a community session.</p> <p>4 Okay. You take the floor, Teresa.</p> <p>5 MS. MEADOWS: Thank you, Mr. Chair. Teresa</p> <p>6 Meadows, legal counsel to the Nunavut Water Board.</p> <p>7 So, Mr. Chair, there is an evening session</p> <p>8 starting at 7 tonight for the community, so a community</p> <p>9 information session in accordance with that agenda.</p> <p>10 But I note that we have gotten through the majority of</p> <p>11 the public hearing agenda today, and so following the</p> <p>12 community session tonight, if there is still time, we</p> <p>13 may close off the public hearing with final statements</p> <p>14 of the -- of the Applicant and the interveners.</p> <p>15 And, also, we would like to close with the</p> <p>16 deferred responses from the -- from the Applicant being</p> <p>17 read into the record tonight. So if the Applicant can</p> <p>18 be prepared for that, we would very much appreciate it.</p> <p>19 It would mean that we were able to close our record and</p> <p>20 be able to begin decision-making for the file.</p> <p>21 So with that, Mr. Chair, those are just sort of my</p> <p>22 advanced warning that we will be expecting responses to</p> <p>23 deferred questions at the end of the community session</p> <p>24 tonight.</p> <p>25 Thank you, Mr. Chair.</p> <p>26 THE CHAIR: Go ahead, Stephanie.</p>

<p style="text-align: right;">121</p> <p>1 MS. AUTUT: Thank you, Mr. Chair.</p> <p>2 Stephanie Autut, Water Board.</p> <p>3 Mr. Chair, if I could just remind the parties that</p> <p>4 when we return to the venue tonight we will be asking</p> <p>5 that the questionnaire -- the health questionnaire and</p> <p>6 the temperature checks be conducted once again. So if</p> <p>7 parties could arrive a few minutes early to allow for</p> <p>8 that, we can begin our session closer to 7:00 as a</p> <p>9 reality, so I'd appreciate the consideration in that</p> <p>10 timing.</p> <p>11 Thank you, Mr. Chair.</p> <p>12 THE CHAIR: Thank you.</p> <p>13 So we take the recess now and then come back here,</p> <p>14 and if you have time, like the -- the staff -- legal</p> <p>15 counsel mentioned, we'll proceed with it. Thank you.</p> <p>16 Thank you all. See you again.</p> <p>17 _____</p> <p>18 PROCEEDINGS ADJOURNED UNTIL 7:00 PM</p> <p>19 _____</p> <p>20 (PROCEEDINGS RECOMMENCED AT 7:15 PM)</p> <p>21 Community Session</p> <p>22 Opening Remarks (Community Session)</p> <p>23 THE CHAIR: Good evening. Everyone,</p> <p>24 welcome to the community session for the Nunavut</p> <p>25 Water Board public hearing for the application filed</p> <p>26 the Nunavut -- Community -- Government of Nunavut,</p>	<p style="text-align: right;">122</p> <p>1 Community Government -- Community and Government</p> <p>2 Service Department. Where's my eye glasses? This one.</p> <p>3 Okay. I better put these on first. That better one.</p> <p>4 Okay. I can see better now.</p> <p>5 I will refer to them "GN-CGS" for short -- to</p> <p>6 renew and amend their expired Type "B" Water Licence</p> <p>7 No. 3BM-RUT12 -- 1520 with a Type "A" Water Licence</p> <p>8 No. 3AM-RUT---</p> <p>9 My name is Lootie Toomasie, and I'm -- I'm the</p> <p>10 Chair of Nunavut Water Board and the hearing Chair for</p> <p>11 this public -- public hearing. This public hearing is</p> <p>12 being conducted by the Nunavut Water Board to consider</p> <p>13 an application by GN-CGS asking the Nunavut Water Board</p> <p>14 to issue a renewed and amended water licence for a term</p> <p>15 of 20 years to authorize activities associated with</p> <p>16 continued service, use of the water, and disposal of</p> <p>17 sewage through the utilidor system at the hamlet of</p> <p>18 Resolute Bay.</p> <p>19 I would like to note that some parties are joining</p> <p>20 the public hearing via Zoom conference call, so I would</p> <p>21 like to ask those participants who are calling in to</p> <p>22 mute their microphone to avoid any unnecessary noises.</p> <p>23 I would also like to remind everyone to please --</p> <p>24 to please turn off your cell -- cell phones or put them</p> <p>25 on silent before we begin.</p> <p>26 Before we proceed with tonight's session, let us</p>
<p style="text-align: right;">123</p> <p>1 begin with a prayer. Let's stand and pray. Let's</p> <p>2 pray.</p> <p>3 Opening Prayer (Community Session)</p> <p>4 THE CHAIR: For those of you who were not</p> <p>5 here this morning when we started the public hearing, I</p> <p>6 have a few briefing [sic] housekeeping and introductory</p> <p>7 remarks, and then I will turn the microphone over to</p> <p>8 the executive director and the staff of the Nunavut</p> <p>9 Water Board, the Applicants, and then to interveners.</p> <p>10 Before I do, I would like to remind everyone that</p> <p>11 we are currently in the middle of the global pandemic,</p> <p>12 so we'll be discussing safety measures a lot. As</p> <p>13 everyone can appreciate, due to the public health risks</p> <p>14 associated with the COVID-19 pandemic, our proceeding</p> <p>15 may look different than usual as we have had to modify</p> <p>16 our normal plans to keep us all safe and in compliance</p> <p>17 with local public health requirement.</p> <p>18 Tonight, to provide our health and safety</p> <p>19 briefing, we will have Teresa, legal counsel for the</p> <p>20 Nunavut Water Board, do the briefing on -- on -- on</p> <p>21 this protocol.</p> <p>22 Teresa.</p> <p>23 MS. MEADOWS: Thank you, Mr. Chair. Teresa</p> <p>24 Meadows, legal counsel for the Nunavut Water Board.</p> <p>25 So, first and foremost, thank you everyone for</p> <p>26 coming out. As you can see, when you look around the</p>	<p style="text-align: right;">124</p> <p>1 gym, we have some participants that are either on Zoom</p> <p>2 or on the telephone because they are from outside the</p> <p>3 territory, and with the travel restrictions into</p> <p>4 Nunavut, it is safest for them to be participating in</p> <p>5 their -- in their own homes and not travelling, coming</p> <p>6 into the territory.</p> <p>7 And second thing you would notice is when you came</p> <p>8 in we gave you a questionnaire, a health-screening</p> <p>9 questionnaire, so that anybody who is experiencing</p> <p>10 symptoms is asked not to come in so that we can prevent</p> <p>11 the spread of COVID-19 or -- or the flu even. So we</p> <p>12 appreciate you filling out those forms.</p> <p>13 We also ask you to sign in, and the reason for</p> <p>14 that is it's a requirement of the Government of Nunavut</p> <p>15 public health office to make sure that we can contact</p> <p>16 trace in the event that anybody did become ill after</p> <p>17 these meetings.</p> <p>18 You will also notice that there are 'X's on the</p> <p>19 floor underneath all the chairs. That is so the chairs</p> <p>20 stay physically distanced, apart from each other, and</p> <p>21 that is so that we can, again, maintain a safe distance</p> <p>22 from each other.</p> <p>23 You'll also notice we have little arrows on the</p> <p>24 floor. So when you came in over at that entrance, we</p> <p>25 ask that you move in one direction so that we're not</p> <p>26 bumping into each other or too close together.</p>

<p style="text-align: right;">125</p> <p>1 You'll notice that the snack table has a number of 2 snacks on it that are all individually wrapped, so 3 please feel free to help yourself to snacks that are 4 there. And there's also hand sanitizer on that table, 5 if you want to use some hand sanitizer before you eat 6 anything or before you touch anything that's on the 7 table. 8 Some of us are also wearing masks. There are 9 people in the group that came in from southern Canada. 10 They are isolating here, and so they will have their 11 masks on when we are close together in close proximity, 12 less than 6 feet apart. We are wearing masks so that 13 we keep ourselves and each other safe. If at any time 14 you would like to wear a mask inside -- it's not 15 mandatory; you don't have to, but if you want to, there 16 are masks and there are gloves at the table that we can 17 provide you with. 18 So, Mr. Chair, as much as we have a lot of things 19 to keep us apart, we're very glad that you came 20 together today and that you're here to join us in these 21 proceedings as we entertain a very important 22 application for the community water supply. So, 23 thank you, Mr. Chair. Those are, sort of, the rundown 24 on some of the changes to our process. 25 THE CHAIR: Thank you, Teresa. 26 Also, please note that there's interpretation</p>	<p style="text-align: right;">126</p> <p>1 available throughout the hearing, and earpieces can be 2 obtained from the table located just by the door as you 3 came in. Channel 1's for English, and Channel 2 for 4 Inuktitut. 5 I would also like to ask everyone to sign in and 6 leave your contact information on the sheet located at 7 the table by the entrance. Additionally, there are 8 COVID-19 screening questionnaire forms available. 9 Please fill them out. This is requirement imposed by 10 the Department of Health for contact-tracing purposes, 11 so we could -- so we would appreciate your help in 12 making sure this information is provided. 13 There will be snack and refreshment, as the legal 14 counsel mentioned, at the -- at the table. Please help 15 yourself. Please remember to wash your hand and use 16 sanitizer by [sic] touching the snack. Also, the snack 17 will be individually packed, so please take -- try to 18 take only item you are going to consume. 19 There's -- there -- agenda for the hearing and 20 this community session available at the table at the 21 entrance. Please take one and follow along. 22 Roll Call 23 THE CHAIR: Before -- before we proceed to 24 the presentation on -- on the agenda, I would like to 25 introduce the Board members and staff who are joining 26 us today -- tonight. I will -- I will be chairing this</p>
<p style="text-align: right;">127</p> <p>1 Panel, and with me today -- tonight, as members of the 2 decision-making Panel responsible for this file, are 3 Board members: Ross -- you aren't on my right -- left. 4 Ross is on -- Ross Mrazek is on my -- on my -- on my 5 left, and Sakiasie Sowdloopik is on my right. 6 Several staff members who have contributed the -- 7 to the Nunavut -- NWB's administration and technical 8 review of this renewal application are present along 9 with the legal counsel to the NWB, and I will introduce 10 the individuals attending today -- tonight. When I say 11 your name, please wave so that people will know who -- 12 where you -- who you are: Stephanie Autut, executive 13 director; Karén Kharatyan, director of technical 14 services; Sergey Kuflevskiy, technical advisor; Robin 15 Ikkutisluk, licensed administrator at the front 16 entrance; Teresa Meadows from Meadow's Law, legal 17 counsel to the Board. 18 In addition, we have two at -- interpretation 19 throughout the hearing: Tapitia -- Tapitia -- sorry -- 20 Qitsualik, who is originally from Gjoa Haven, and we 21 supposed to have Martha Idlout also, but she's not 22 here, so did not -- she had a family issue, kids -- 23 related to her kids. 24 For audio support, we have with us Ryan Dempster 25 from the PIDO. So if you have difficulty with your 26 headsets, Ryan will be able to assist you.</p>	<p style="text-align: right;">128</p> <p>1 To ensure accurate recording of proceeding is 2 kept, we have with us a court reporter, Sara Anderson, 3 from Dicta Court Reporting Incorporated. To assist 4 Sara, I ask that all parties please state your name 5 prior to speaking. 6 Additionally, since we are in the middle of the 7 global -- global pandemic right now, I would like to 8 ask everybody not to approach Sara, the court reporter, 9 and Ross Mrazek, the Board member, directly because 10 they travelled here from outside of Nunavut. Instead, 11 please direct your question to Teresa, and she will 12 relay them to Sara and Ross. 13 With that, I will now turn the microphone over to 14 Stephanie Autut, executive director, to give you an 15 overview of tonight's session. 16 Stephanie. 17 MS. AUTUT: Thank you, Mr. Chair. 18 The Board will start tonight's session with a 19 presentation by the Nunavut Water Board's technical 20 staff, which will be followed by a presentation by the 21 Applicant, the Government of Nunavut, Community and 22 Government Services Department. Following that, we 23 will have presentations by Crown-Indigenous Relations 24 and Northern Affairs and Environment and Climate Change 25 Canada. 26 After each presentation, we will invite anyone who</p>

<p style="text-align: right;">129</p> <p>1 wishes to ask questions or provide the Panel with their 2 comments to step up to the microphone and speak on the 3 record. If you are an Elder, you can speak at any time 4 throughout these proceedings. We just ask that you 5 raise your hand to be recognized by the chairman and 6 wait to speak until one of our staff members can get a 7 microphone for you so that we can ensure your comments 8 are included on the record.</p> <p>9 For everyone here tonight, I encourage you all to 10 ask questions or share your comments with the Board by 11 stepping up to the mic. You can direct your questions 12 to the staff of the Nunavut Water Board, the Applicant, 13 or the interveners, Crown-Indigenous Relations and 14 Northern -- Crown-Indigenous Relations and Northern 15 Affairs, and Environment and Climate Change Canada.</p> <p>16 As Mr. Chair said at the start of the public 17 hearing this morning, it is very important to the 18 Nunavut Water Board that we have an accurate record of 19 the information, the questions, and comments that we 20 hear during this public hearing, so we ask that to 21 assist our interpreters and the court reporter, please 22 wait until you have a microphone before you speak, that 23 you state your name and speak directly, clearly, and 24 slowly into the microphone. Please be mindful of the 25 interpreters as you go and avoid the use of 26 abbreviations if you can. We appreciate your</p>	<p style="text-align: right;">130</p> <p>1 participation and assistance in making sure we are all 2 heard and understood in this hearing and that this 3 hearing is conducted in a productive and respectful 4 manner. I will now turn the microphone over to the 5 Board's technical staff to walk you through how this 6 amendment and renewal application has progressed to 7 this point.</p> <p>8 Sergey, if you could commence your presentation, 9 please.</p> <p>10 So we're just having a brief moment of technical 11 difficulty getting the presentation onto the screen, 12 Mr. Chair, so we will -- just bear with us for a couple 13 of minutes. Thank you.</p> <p>14 (ADJOURNMENT)</p> <p>15 MS. AUTUT: Okay. Sergey, go ahead, 16 please.</p> <p>17 Presentation by the Nunavut Water Board Staff 18 (Community Session)</p> <p>19 MR. KUFLEVSKIY: Good evening, everybody. My 20 name is Sergey Kuflevskiy from the Water Board, 21 technical advisor from the Water Board, and I will give 22 you a brief overview on the procedural history for this 23 application and the brief introduction into the Water 24 Board's licensing process.</p> <p>25 Next slide, please.</p> <p>26 This is the list of topics that I will be covering</p>
<p style="text-align: right;">131</p> <p>1 tonight. I'll start with the general information 2 about -- on the Nunavut Water Board, the types of 3 authorizations and licenses that the Water Board 4 issues. Then I will continue with the Type "A" water 5 licence that we are here to discuss tonight. I will 6 summarize the procedural history of the file and the 7 comments submitted by the interveners and the 8 Applicant, and then I will present -- I will present a 9 brief summary on what's going to happen with the file 10 following today's -- tonight's meeting.</p> <p>11 Next. Okay. So --</p> <p>12 THE CHAIR: Sergey, you're too close to 13 the microphone.</p> <p>14 MR. KUFLEVSKIY: Yeah. Okay.</p> <p>15 Just as background -- background information, the 16 Nunavut Water Board is an institution of public 17 government that was established under Article 13 of the 18 Nunavut Agreement, and Nunavut Board -- Water Board's 19 responsibilities are basically to ensure that the 20 water -- the Nunavut water is safe and that nothing 21 dangerous goes into the water.</p> <p>22 The main objectives of the Nunavut Water Board are 23 the provide for the conservation and utilization of 24 waters in Nunavut, except in a national park, in a 25 manner that will provide the optimal benefit from those 26 waters for Nunavut's residents in particular and</p>	<p style="text-align: right;">132</p> <p>1 Canadians in general.</p> <p>2 The types of authorizations that the Nunavut 3 Water Board can issue can vary. We have three 4 different types of authorizations, actually, and it 5 depends on how much water is going to be used for the 6 project. If the project will consume less than 7 50 cubic metres of water per day, then the proponents 8 will be advised to generally apply for an authorization 9 without a licence. If the water quantities requested 10 are between 50 cubic metres and 299 cubic metres per 11 day, then this will generally qualify as a Type "B" 12 water licence. And the quantities of water over 13 300 cubic metres per day will require a Type "A" water 14 licence process.</p> <p>15 This week's public hearing is for a Type "A" water 16 licence, and this is based on the criteria set out in 17 Schedule 2 and 3 of the Regulations. This is -- on 18 this slide, you will see a brief overview of the 19 licensing process for -- for a Type "A" file. First, 20 the Water Board receives an application from an 21 Applicant, then the application is reviewed by the 22 Water Board staff, and if any documentation is 23 outstanding, this information will be requested from 24 the Applicant, and once everything is provided, the 25 application is going to be distributed for a 30-day 26 review for completeness check. This is the initial</p>

<p style="text-align: right;">133</p> <p>1 step when the parties will be involved -- parties and 2 the public will be involved to ensure that the 3 application is complete and can be proceeded to a 4 technical review stage. 5 So once the Water Board receives the confirmation 6 from the parties or the public, if public decides to 7 submit any comments -- so if the confirmation suggests 8 that the package is complete and can be distributed 9 for -- for a full technical review, the Water Board 10 will distribute the package for a 30-day technical 11 review. And this is the stage where the parties and 12 the public will conduct a more detailed technical 13 investigation and provide their comments and questions 14 for the file under review. 15 So once all the questions are sorted out, one -- 16 once all -- all the comments are addressed, the file 17 goes to the next step, which is the technical meeting 18 and the prehearing conference. At the technical 19 meeting, the parties meet either in person or by 20 teleconference, and this generally depends on -- on a 21 lot of circumstances. Like, for this specific file, we 22 had a teleconference technical meeting because of the 23 restrictions imposed by the Department of Health and 24 associated with the COVID-19 pandemic. 25 So once this stage is over, technical meeting and 26 prehearing conference, the Water Board will issue a</p>	<p style="text-align: right;">134</p> <p>1 prehearing conference decision that -- which will be 2 distributed to -- to the interveners and to the public. 3 So all this information is available and can be found 4 on our website. 5 Following this step, the Water Board issues a 6 notice of public hearing, and this generally happens 7 60 days prior to the public hearing. During this time, 8 the parties exchange the written interventions, which 9 means that parties will provide their final comments, 10 and the proponent will try to respond to these 11 comments, and the main point of this stage is to ensure 12 that the file is ready and has almost no outstanding 13 issues so that all issue -- most issues are resolved so 14 that the file can definitely go to the public hearing 15 stage. 16 And this brings us to the actual public hearing 17 stage, which is the current stage. It's circled on 18 the -- on the slide. So now what happens after that -- 19 like, following the public hearing, the Water Board 20 will issue a decision to approve or disapprove the 21 application, and this decision will be -- the draft of 22 this decision will be forwarded to the Minister of 23 Crown-Indigenous Relations and Northern Affairs Canada 24 who will further decide whether this project should go 25 forward or not. 26 So now I will talk a little bit about the</p>
<p style="text-align: right;">135</p> <p>1 application that we are currently reviewing. So the 2 scope of this application is as follows: The 3 Government of Nunavut, Community and Government 4 Services, or "GN-CGS" for short, requested to allow for 5 the continued use of water and disposal of sewage at 6 the -- through the utilidor system in the hamlet of 7 Resolute Bay. The term of the licence was initially 8 ten years. So the initial requested term was 10 years, 9 but then the licensee has adjusted this term -- this 10 request to 20 years, so we're looking at the potential 11 20-year licence for -- which will govern the utilidor 12 system in the hamlet of Resolute Bay. 13 The water volumes requested -- the -- the water 14 use requested is as follows: The two parameters are of 15 a particular interest. The first one is that the water 16 is withdrawn from the Char Lake. I'm sure everybody 17 knows where it is. And the second aspect is the volume 18 of water, which is 216,528 cubic metres per year. So, 19 additionally, GN-CGS requested for an approval to 20 continue management of the utilidor system, which is 21 operated by -- by ATCO, and future construction of the 22 wastewater management plant -- wastewater treatment 23 plant. 24 Now to get to the procedural history of the file. 25 I'll just highlight the important milestones for the 26 file. We'll start with the date when the application</p>	<p style="text-align: right;">136</p> <p>1 was submitted, which is at the end of January, 2 January 22nd. So then the application was reviewed 3 between January 23rd and February 28th and distributed 4 for an initial completeness check assessment on 5 February 28th. 6 Following this stage, the comments were received 7 from Crown-Indigenous Relations and Northern Affairs 8 Canada, as well as Environment and Climate Change 9 Canada. Between March 27th and April 22nd, the 10 Applicant addressed the comments that were provided by 11 the parties. On March 29th, 2020, the Type "B" 12 licence, the current licence that governs the water use 13 in this community, expired. On April 29th, the 14 Water Board distributed the package for a full 15 technical review, and the deadline for a full technical 16 review was June 12th. 17 So following this -- following this stage, the 18 Water Board scheduled a technical meeting and a 19 prehearing conference for July 14th and July 15th of 20 this year, so it's pretty much six months after the 21 application was submitted. Both technical meeting and 22 the prehearing conference were completed in a single 23 day, July 14th, and the prehearing conference report 24 was issued on July 27th. 25 Following this stage, the Applicant had almost two 26 months to respond to the commitments that were listed</p>

<p style="text-align: right;">137</p> <p>1 in the prehearing conference decision report and sort 2 out any outstanding issues. On October 8th, the 3 Water Board issued the draft agenda for the public 4 hearing, and on the same day, the Water Board received 5 a preliminary presentation for -- from the GN-CGS for 6 the public hearing. 7 On October 14th and 15th, the Water Board received 8 public hearing presentations from Crown-Indigenous 9 Relations and Northern Affairs Canada, as well as a 10 presentation from Environment and Climate Change 11 Canada. On October 20th, the Nunavut Water Board 12 distributed the final agenda to the distribution list, 13 and on October 21st, the Applicant submitted a final 14 presentation to the Water Board. 15 Now I'll explain how the interveners were involved 16 in the licensing process in the application process for 17 this file. The Applicant, Crown-Indigenous Relations 18 and Northern Affairs Canada, and Environmental and 19 Climate Change Canada have all contributed to the 20 review process for the application. This means that 21 these parties participated in a formal and informal 22 discussions aimed at resolving relevant issues, as well 23 as provided the Board and the proponent with valuable 24 technical information, questions, or concerns on 25 relevant issues. 26 The public was also invited to participate in the</p>	<p style="text-align: right;">138</p> <p>1 application process. As I mentioned before, all of our 2 correspondence goes to the distribution list, which 3 includes all local organizations as well as the 4 interveners and an Applicant. So the public also had a 5 chance to submit their comments or concerns. No 6 submissions have been received from the public to date. 7 If you have any questions or advices regarding 8 this file, you are more than welcome to approach myself 9 or Robin at the registration desk, and we can try to 10 answer your questions and take notes of your advices or 11 comments. Additionally, this information is available 12 on the Nunavut Water Board website. Again, if you want 13 to see this information or look at some files, Robin 14 can provide you with this access. She can -- she can 15 show you where the documents are located, and she'll 16 also try to answer your questions. 17 Now I'll briefly explain what the next steps for 18 the file are going to be. The public hearing this week 19 is chaired by the Board Panel and is led by the -- by 20 the Board's Chair. The Panel is -- usually consists of 21 three Board members. As you can see, we have three 22 members sitting at the -- at the table at the front. 23 And the -- this Panel's entitled "Resolute Bay Panel" 24 or "P21". The Panel is here to consider all the 25 questions from the interveners and all the 26 recommendations from the interveners, as well as the</p>
<p style="text-align: right;">139</p> <p>1 recommendations and concerns presented by the parties. 2 Following this, the Panel will have 30 to 45 days 3 to issue a decision, and, of course, the public will be 4 informed about this decision once the decision is 5 issued. 6 This is all for my presentation. Thank you very 7 much. So we will have another presentation following 8 this, the presentation by the Applicant, and the 9 Applicant will provide more details on the project and 10 on what is going on with the licence application and 11 what is going on in the community, how your 12 infrastructure is going to change, when the 13 construction is going to be completed, and basically 14 what to expect in the future. So just wait a little 15 bit, and you'll -- you'll hear another presentation 16 from the Applicant. Thank you. 17 MS. AUTUT: Thank you, Sergey. 18 So as Sergey just mentioned, this -- this 19 presentation that's just been received is -- is just 20 related to the Water Board's processing of the 21 application. So are there from the public or any of 22 the parties regarding the Board's processing of the 23 application before them? 24 Okay. Seeing that there are no questions just 25 yet, we'll move on to the Applicant. We ask that you 26 make a brief presentation about the amendment</p>	<p style="text-align: right;">140</p> <p>1 application that's being discussed here at this 2 hearing. 3 So, Bhabesh, I assume that you'll be taking the 4 lead on the presentation? Okay. So, Bhabesh, we are 5 unable to hear you. Once again, you continue to be 6 muted. If you could give us some indication of what 7 your plan is, whether you will be presenting or if you 8 want one of your representatives here in the room to 9 present. Okay. Bhabesh, apparently you have hung up. 10 Can you please try to call back in. 11 MR. ROY: Yeah, I've called back. I'm 12 online. 13 MS. AUTUT: Very good. Can you please 14 proceed with your presentation. Thank you. 15 Presentation by Government of Nunavut, Community 16 Government Services (Community Session) 17 MR. ROY: Okay. Thank you. 18 Good evening, everyone. I am Bhabesh Roy. I'm 19 going to present the Type "A" water licence application 20 on the Resolute Bay utilidor system. In this 21 presentation, I have a big team working with me. I am 22 the licensee, and I am also the main contact of the 23 licence and the leader of this application. I'm 24 assisted by Janise Idlout, municipal technical officer 25 working in my office, and also I am supported by the 26 Municipality of Resolute Bay, Steve Piercey, chief</p>

<p style="text-align: right;">141</p> <p>1 administrative officer. I'm supported by a group of 2 seniors [sic] technical advisor from EXP, the -- Eric 3 Bell, who is already in the conference room, and online 4 is Tony Whalen and Daryl Burke. All three of them from 5 EXP are highly involved in each and every component of 6 the Resolute Bay utilidor system. 7 I'm going -- going back to a little history of -- 8 of Resolute Bay and the current situation. When this 9 community -- this settlement was formed 1970. It was 10 designed in a way to accommodate 1,500 people. Today, 11 in 2020, the population of the town is 290, but this 12 290 is a basic population. As you know, Resolute Bay 13 is a training ground of Canadian military, so 14 summertime, the military do come -- used to come there 15 and get their training. That increased the population 16 up to roughly 800. 17 So the resident of Resolute, you know that this 18 town divided into two component. One is the main town, 19 and another part is the airport area. The main town is 20 supplied by pipe water system, and the water and sea 21 are all utilidor -- what we call "utilidor system". 22 7 kilometre away, the airport -- there is the 23 airport area. That area, almost 18 households -- I 24 mean the 18 buildings, Government and others. Those 25 areas have by truck system. This is a little tiny 26 town. We have three water licence. The utilidor</p>	<p style="text-align: right;">142</p> <p>1 itself a water licence. It belonged to the Government 2 of Nunavut while I'm the licensee. The second licence 3 is solid waste management, the landfill site. It 4 belonged to the Hamlet. And third licence, the airport 5 sewage lagoon, who is inherited from Transport Canada 6 long time ago, and this licence belonged to, also, 7 Government of Nunavut. It belonged the Department of 8 Economic Development and Transportation. 9 In my presentation, the status of the licence 10 present and the future -- the present licence is called 11 "3BM-RUT1012". The licensee is Community Government 12 Services of the Government of Nunavut. The type of the 13 licence is called "Type "B"". Date of issue is 14 March 30, 2015. Date of expiry is March 29, 2020. 15 This was a previous licence. The annual water 16 extraction, 126,020 cubic metre. 17 Now, as you see the previous presentation, seeing 18 Water Board have a new regulation and from the 19 extraction in this 300 cubic metre per day, the type of 20 the licence will be Type "A". So we are following in 21 that category. So our new licence will be a Type "A" 22 licence, and there is not -- a number is not given yet. 23 When licence is issued, the licence number will be 24 3AM-RUT, and there will be a number. The licensee will 25 remain the same, Community Government Service of 26 Government of Nunavut. It will be Type "A" licence.</p>
<p style="text-align: right;">143</p> <p>1 This licence is requested for 20-years term, and the 2 permit of the licence is 216,520 cubic metres. If you 3 can express in litre, it should be two -- two thousand 4 one hundred and sixteen million [sic] litres. There's 5 a huge amount of water we need to extract from -- from 6 Char Lake. 7 I have my colleague, Janise Idlout. I want Janise 8 to take over from here until the sketch, three -- three 9 slides. Historical water extraction, you start from 10 there, and then Eric will continue, and I'll be doing 11 the last slide. 12 Janise. 13 MS. IDLOUT: Thank you, Bhabesh. Janise 14 Idlout here. Trucking to -- I don't know. No, no, no. 15 No, I can't. Yeah. 16 MR. ROY: (INDISCERNIBLE) 17 MS. IDLOUT: Eric. I ... 18 MR. BELL: Janise has asked me to take 19 over for a little bit, so I shall. 20 MR. ROY: Okay. Okay. Yeah, sure. 21 Go -- 22 MR. BELL: On this particular -- 23 MR. ROY: Go ahead. 24 MR. BELL: On this particular slide, 25 there is some historical flow data pertaining to the 26 utilidor system as well as the trucking to the airport</p>	<p style="text-align: right;">144</p> <p>1 system and then the totalized flow. You can see that 2 on some of the years it is as low as 114,000 litres, 3 and on other years, the number that has reported has 4 been 400,000 litres -- or cubic litres. That is why 5 the permit to request has been -- from the original 6 licence of 126,000 cubic metres has been increased, so 7 that we can meet the demand of the current and future 8 needs. 9 MS. IDLOUT: Janise here. 10 Components of the future utilidor system. 11 MR. ROY: Yeah. 12 MS. IDLOUT: Status: The main buried water 13 and sewer lines, main utilidor system upgraded in 2014. 14 Vaults were upgraded in 2014. Fire hydrants upgraded 15 in 2014. An intake from the Char Lake to the new pump 16 station under construction 2020/2021. Fish screen will 17 be provided at the end of the intake, 2020/2021. A new 18 pump station at Signal Hill under construction 19 2020/2021. The standard flow meter will be installed 20 at the new pump station, 2020/2021. Intakes from the 21 new pump station to Signal Hill water treatment plant 22 is constructed. A storage tank at Signal Hill is 23 constructed. 24 Rehabilitation of the existing water treatment 25 plant under construction in 2020/2021. New wastewater 26 treatment plant, future construction anticipated in</p>

<p style="text-align: right;">145</p> <p>1 2024. A new outfall from water -- wastewater treatment 2 plant to the sea, future construction anticipated in 3 2024. A collection point to -- a collection point at 4 wastewater treatment plant to receive truck sewage, 5 future construction anticipated in 2024. The old pump 6 station macerator unit, outfall line, and old water 7 [sic] treatment plant building, future 8 discommissioning [sic] anticipated in 2014 -- 2024. 9 I'm sorry. 10 Components of the utilidor system: 40 [sic] 11 kilometres of buried water in sewer lines; 23 fire 12 hydrants; 36 access vault; a pump station at Char Lake; 13 a 500-metre three-water storage tank at -- 14 MR. ROY: Metre cube. 15 MS. IDLOUT: -- Signal Hill. 16 MR. ROY: Metre cube. 17 MS. IDLOUT: Water treatment plant at 18 Signal Hill; macerator unit with no flow meter; a 19 150 -- millimetre? 20 MR. BELL: Millimetre, yeah. 21 MS. IDLOUT: -- millimetre 6 diameter water 22 intake line from the Char Lake to the pump station; 23 150 millimetre 6 diameter water intake line from the 24 pump station to Signal Hill water treatment plant; a 25 200 millimetre -- millimetre 8 diameter outfall line 26 from macerator unit to sea. The original utilidor</p>	<p style="text-align: right;">146</p> <p>1 system was built in 1978 and upgraded in 2014. 2 MR. ROY: Okay. Okay. Thank you very 3 much. Before we hand over to Eric, I just make one 4 correction. 5 Item Number 7, the flow meter in the macerator 6 unit, it has been installed. So, yes, there is a flow 7 meter in macerator unit. 8 Okay. Eric, please continue from here. 9 MR. BELL: Thank you very much, Bhabesh 10 and Janise. 11 On this slide, there are two things that are being 12 represented, the way the intake and treatment plant and 13 utilidor is currently and how it will look in the 14 future. Currently, water comes from Char Lake through 15 the existing Char Lake pump house to Signal Hill water 16 treatment plant. And as Janise mentioned earlier, 17 there's a 500-cubic metre storage tank. The water is 18 then sent through the municipality of Resolute Bay in a 19 utilidor system, and upon the generation of wastewater, 20 under the light green line, it goes through a macerator 21 unit and then to the final outfall in the ocean. And 22 the compliance point of measurement is at the 23 shoreline. 24 In the future, water will come in from Char Lake 25 through the new pump house and the new intake line 26 through the treatment plant to be stored in the same</p>
<p style="text-align: right;">147</p> <p>1 500-cubic metre tank down through the utilidor system 2 in the municipality, and then the exit of it into the 3 wastewater will be going into the proposed new 4 wastewater treatment plant where the compliance point 5 for that will be at the discharge of the plant. 6 Currently, trucks are filled with freshwater at 7 the Signal Hill plant for the airport. That won't 8 change. And in the future, wastewater trucks will be 9 dumped at the new wastewater treatment plant. 10 The -- the quantity of water that has been 11 requested has been estimated over the duration of this 12 proposed construction project from 2020 to 2047. The 13 community consumption in litres per day is estimated at 14 65,000 in 2020 all the way up to 90,000 in twenty 15 seventy -- or 47. This is because of additional use 16 and the growth of population. 17 Airport consumption also increases based on users, 18 and the -- the bleed water that is used to keep the 19 sewer system from becoming frozen also increases 20 gradually over that time. In summary of this slide, 21 the current estimated consumption is 160 cubic metres 22 per day -- or per year, I should say. And in 2040, it 23 is 216,000 cubic metres annually with the ultimate of 24 2047 being 236,000. 25 The total extracted water accounts for use within 26 the community, the airport, and the bleed water into</p>	<p style="text-align: right;">148</p> <p>1 the sewer system. Annual consumption for 2020 has been 2 calculated at 160,000 cubic metres and up to twenty -- 3 236,000 cubic metres in 2047. Char Lake replenishment 4 capacity is sufficient up until 2040 to supply water 5 for the community based on these very conservative 6 estimates. It is recommended that additional 7 technologies be investigated, such as recirculation of 8 heat-trace systems to replace the bleed water system to 9 prevent water from freezing since Char Lake cannot 10 supply this extreme demand past 2040. A water permit 11 of 216 cubic metres is requested for the new Type "A" 12 water licence that will expire in 2040. 13 The current state of Char Lake pump house and 14 construction: A significant amount of work has been 15 done during this construction year of 2020 at the 16 Char Lake site. That includes installation of silt 17 fencing around the worksite; excavation for the new 18 pump house; concrete pours for the foundation; the new 19 pump house building has been constructed; boilers and 20 glycol pumps and pipes have been installed; gravel and 21 bedding material has been placed in Char Lake with a 22 turbidity curtain to prevent particulate matter from 23 entering the raw water supply. And these new intakes 24 will be then placed in 2021 construction season. 25 The Signal Hill water treatment plant upgrade has 26 been recommended that the water treatment process</p>

<p style="text-align: right;">149</p> <p>1 includes multiple filtration steps and disinfection 2 with calcium hypochlorite or chlorine. The filtration 3 will provide for the suitable protection of 4 microorganism removal and small amounts of TSS that may 5 be picked up by the Char Lake intakes. The chlorine 6 addition will protect against viruses and 7 microorganisms from the water source and provide 8 protection for any cross-contamination that may occur 9 in the collection system and distribution. 10 The first stage of the filters will be duplex 11 backwashable media filters. And the media filter 12 types -- this type of media filter will remove down to 13 a 7-micron size, which is suitable for large turbidity 14 and giardia cysts. 15 The second set of filters will be pleated filters 16 or cartridge filters which will filter down to 1 micron 17 in size which is suitable for further removal of 18 smaller particles, as well as cryptosporidium. 19 The disinfection method to be employed will be 20 calcium hypochlorite or chlorine, and it will be 21 delivered to the hamlet and prepared -- in dry format 22 and prepared in a 24-hour period in a mix tank. 23 The upgrade to the water treatment plant on 24 Signal Hill examines the requirements as outlined by 25 the Canadian Drinking Water Guidelines. This includes 26 the upgrade of disinfection equipment and filtration</p>	<p style="text-align: right;">150</p> <p>1 equipment. The capital costs, as well as the 2 operational needs, over 30 years operational life, were 3 considered during equipment selection. The upgraded 4 water treatment plant will be in the same building but 5 in -- will incorporate the new filtration equipment, 6 new disinfection equipment, new circulating pumps, a 7 washroom facility, a storage area, as well as a 8 laboratory area and a maintenance area. 9 The unused reservoir tank has already been 10 removed, and the building will be expanded in an 11 easterly direction. A significant amount of work has 12 been completed in this year's construction season, and 13 that includes site grading; concrete demolition; 14 building addition, including concrete walls, roof, and 15 cladding; and any old equipment and obsolete equipment 16 has been removed. 17 As part of this ongoing construction project, a 18 spill contingency plan has been put in place. The 19 spill contingency plan is used to address the proper 20 response to any anticipated spills that may occur 21 during regular operation and in the hamlet facilities, 22 including the wastewater treatment disposal, the water 23 supply treatment, and solid waste disposal. The spill 24 contingency plan presents potential contaminants and 25 spill scenarios, existing preventative measures, and 26 response organization.</p>
<p style="text-align: right;">151</p> <p>1 The spill containment action plan includes 2 potential impacts from and procedures for containing 3 chemical spills, such as the sodium hypochlorite used 4 to treat the water, and petroleum spills, such as 5 diesel, used to power equipment. This plan also 6 provides information in case of a spill and spill kit 7 locations and spill reporting procedures, such as the 8 form seen. It also includes the standard spill kit 9 requirements. 10 At the wastewater treatment plant, a number of 11 technical issues and concerns regarding the current and 12 future wastewater treatment have been raised by 13 stakeholders during this project. As such, we have 14 prepared and submitted a technical memo addressing the 15 recommended fecal coliform limits and operation and 16 maintenance plan for the existing macerator equipment 17 and building, a technical memo addressing ammonia for 18 the new wastewater treatment plant, and a memo that 19 reviews both the 2012 and the 2020 wastewater treatment 20 plant designs. 21 The calculated fecal coliform values were 22 determined based on 18 points from 2016 to 2020 and 23 calculated using linear regression. And it should be 24 noted that for flows of greater than 600 litres per 25 person per day and a TSS of 80 milligrams per litre, 26 the fecal coliforms were determined to be 157,000 CFUs</p>	<p style="text-align: right;">152</p> <p>1 per hundred mills. For flows between 150 litres per 2 person per day and 600 litres per person per day, the 3 calculated fecal coliform value were determined to be 4 183,000. 5 There were a number of key design factors that 6 remain very similar or unchanged between the original 7 design of 2012 and the proposed evaluation of 2020. 8 The most significant difference was the process 9 technology with the intent to better balance the 10 treatment performance with the requirements for the 11 economics and operational challenges. We feel the 12 result is a more cost-competitive system but is still 13 compatible -- or capable of providing high-quality 14 effluent. 15 MR. ROY: Okay. Thank you, Eric. Let 16 me take over the last slide. 17 The last side is -- the rule of thumb of any 18 wastewater treatment plant is we have to treat the 19 wastewater and through to the receiving body. In this 20 case, the receiving body is the sea. And rule of thumb 21 is -- the water is going to the sea -- the quality must 22 be better than sea water quality or at least equal to 23 the seawater quality. So this process, we have to do 24 the sampling. As Eric explained, there is a compliance 25 point after the wastewater treatment plant. Today, at 26 the outfall level -- so we have to take a sample in</p>

<p style="text-align: right;">153</p> <p>1 summer every month, send it to water laboratory, and do 2 the necessary testing. 3 Now, this particular slide, the future wastewater 4 treatment plant -- there are some criteria given to us 5 by ECCC. They are asking -- we have to -- from design 6 and build the wastewater treatment plant so that 7 effluent quality should satisfy -- we call it "CBOD", 8 the carbonaceous biochemical oxygen demand, should be 9 less than 25 milligram per litre. Total suspended 10 solids should be less than 25 milligram per litre. 11 Average concentration of total residual chlorine should 12 be less than 0.02 milligram per litre. Maximum 13 concentration of unionized ammonia should be less than 14 1.2 milligram per litre and be non-accurately lethal 15 effluent. 16 So these are the parameters given to us. 17 Accordingly, we have to design and build the future 18 wastewater treatment plant so that we can bring water 19 quality up to this level. It should be better than 20 this, but at least satisfying this criteria before the 21 effluent we are flowing to the sea. 22 So this is the last slide of our presentation, so 23 we are ready to get your answers -- sorry, questions to 24 answer. 25 MS. AUTUT: Thank you, Bhabesh, and your 26 team members for the presentation.</p>	<p style="text-align: right;">154</p> <p>1 At this point, we'll take questions from the 2 floor. If anybody has questions for the Applicant, 3 Government of Nunavut, please raise your hand, and 4 we'll ensure that a microphone gets to you. Okay. 5 Seeing that we -- are there any questions to the 6 Applicant at this time from any other party? 7 THE CHAIR: The Panel members have a 8 question related to -- Tapitia, I guess, we want to ask 9 how delegate the -- Sakiasie about the question. 10 MR. SOWDLOOAPIK: Okay. Finally got it. 11 THE CHAIR: You gotta go, I guess. 12 Nunavut Water Board Questions the Community (Community 13 Session) 14 MR. SOWDLOOAPIK: I'm getting old. 15 Thank you. Good evening, presenters this evening. 16 My name is Sakiasie. I'm with the Water -- Water 17 Board. I'm from Pangnirtung. 18 This morning I asked about the lake, Char Lake, 19 and once I got the documentations last night, I've been 20 fairly concerned about it. This morning I asked about 21 Char Lake, which I like the name very much because I'm 22 a fisherman. I'm -- I want to know if there -- from 23 the community, if there is any activity for fishing in 24 the lake and also if there is any ecosystems in the 25 lakes being conducted as studies in the last few years. 26 So these are my questions, and if anybody can</p>
<p style="text-align: right;">155</p> <p>1 answer them, I would very much appreciate it. 2 Qujannamiik. 3 MS. AUTUT: Thank you, Sakiasie. 4 So Sakiasie's question is for the community 5 members. Is anyone interested in addressing that 6 question at this time? 7 Okay. We'll get you a microphone, and then just 8 state your name; okay? 9 TABITHA MULLIN: Char Lake. Yes. Long as I've 10 been here, I know there's fish there. Very little 11 fishing is done there for the fact that we know it's 12 our drinking water. We know it's clean. I don't 13 really recall of that lake being studied, but the fish 14 were done by the help with a local lady, Debbie Ikaluk, 15 and her son was a researcher. And we sort of heard 16 that the fish are healthy. They were coming back, so 17 it sounded good. Perhaps get a copy of that report. 18 He comes up here every -- every summer. I remember -- 19 I don't remember his name, though. Sorry. 20 But that's all I know about the studies with 21 the -- with the Char Lake being done. And normally 22 they come in through Polar Shelf, with the support of 23 Polar Shelf. They do these lakes around here, upon 24 Ellesmere Island too. So he's got a good name behind 25 him in search of -- research for the fish and lakes. 26 MS. AUTUT: Okay. Thank you.</p>	<p style="text-align: right;">156</p> <p>1 Can I -- one more question for the audience. Can 2 we -- can we just get your name for the record. That's 3 okay. 4 TABITHA MULLIN: I got so nervous. It's 5 Tabitha Mullin. 6 MS. AUTUT: Thank you, Tabitha. 7 Sakiasie, does that answer your question, or do 8 you have a follow-up? 9 MS. SOWDLOOAPIK: Mr. Chairman and the Panel, 10 technical staff, and Tabitha, Qujannamiik. Yes, that 11 answers my question. Qujannamiik. 12 MS. AUTUT: Great. Thank you. 13 Are there any other questions on the floor or from 14 any party for the Applicant? We'll get -- we'll get 15 the young gentleman there a microphone. If you could 16 state your name, please, on the record. 17 The Community Questions the Government of Nunavut, 18 Government Community Services (Community Session) 19 JOADAMEE IQALUK: Jaodamee Iqaluk. 20 In recent years, our road going to the airport 21 used to overflow and get washed out. It doesn't do 22 that anymore. Is that due to the difference in 23 consumption, or -- because every -- every time our 24 water used to -- river used to flow, it used to wash 25 out our road every year. I wonder if that's due to 26 different consumptions or leaks underground. Because</p>

<p style="text-align: right;">157</p> <p>1 40 feet is pretty deep, 'eh? Some areas are really 2 deep, and I'm pretty sure it's due to leakage. It's -- 3 it was normal for that road to be washed out but not 4 anymore. Thank you. 5 MS. AUTUT: Okay. Joadamee, thank you for 6 that question. I'm going to hand that question over to 7 Bhabesh as the Applicant. 8 Bhabesh, if you could respond to that question, 9 please. 10 MR. ROY: Yes. Thank you, Teresa [sic]. 11 Yeah. Thank you, audience, for a very interesting 12 question. The road to the airport -- the answer to 13 your question is I have been watching this facility -- 14 it's now 16 years. I don't foresee any kind of leak 15 from the lake passing through the road to -- to the 16 sea. Again, though, the lake is other lake, and there 17 is no liners. The overflow above the road is due to 18 the maintenance issue. Sometimes coin -- the road is 19 not properly maintained. There is a hydrant. If this 20 hydrant is blocked, then the rainfall water or the snow 21 melt water overflowing the road. So either the 22 drainage is blocked, or there is no drainage at this 23 site for some reason. 24 So your concern I will be dealing with the Hamlet, 25 and they'll be looking after this issue. Thank you. 26 MS. AUTUT: Thank you, Bhabesh.</p>	<p style="text-align: right;">158</p> <p>1 Joadamee, did that answer your question? 2 JOADAMEE IQALUK: Not really. 3 MS. AUTUT: Not really. Okay. 4 Bhabesh, the question has not been answered to the 5 satisfaction of the floor. Did you wish to add to 6 the -- add to your answer? 7 MR. ROY: As I said -- yes, please. I'd 8 be -- my -- I'll just clarify to the question. The 9 gentleman is thinking the water may be uprooted from 10 the -- from the Char Lake and running over the road 11 to -- going to the sea. It might not be the case 12 because the -- that lake -- lake water cannot run 13 over -- cannot be percolated because in wintertime it 14 is totally frozen, and permafrost in Resolute Bay is 15 too deep. So wintertime we cannot even think about. 16 Summertime, the water is the surface runoff. 17 There is -- 18 JOADAMEE IQALUK: No, no, no. 19 MR. ROY: -- the snow melt. 20 So if you slowly drive around from the town to the 21 airport, you will see there is this hydrant, and -- 22 JOADAMEE IQALUK: No, I know -- 23 MR. ROY: -- many times there are so 24 many small, small culverts. Many times I saw the 25 culverts are blocked, so water overflows. Sometimes 26 the drainage is blocked with the garbage, with the</p>
<p style="text-align: right;">159</p> <p>1 paper, so the water cannot pass through. Then it 2 overflow. 3 So I cannot give you any kind of scientific answer 4 when I have to do the water testing from in and out or 5 doing some kind of test to see if the water is 6 percolating, but, from my experience, I assure you that 7 this water is not coming from the Char Lake. 8 MS. AUTUT: Okay. Thank you for that. 9 Any further follow-up questions? 10 JOADAMEE IQALUK: Yeah. That's not exactly what 11 I was saying. Is -- it is normal for water to be 12 overflowing in the river. I'm asking, is the 13 consumption different because the lake is deeper, 14 emptying out? Like, you know, the more water we use 15 the deeper it gets; right -- or the more shallow it 16 gets, I should say. And every year when the snow 17 starts melting and flowing into the lake, it just stays 18 in the lake now; it doesn't go through the river 19 anymore. 20 So I'm asking, is that from a different 21 consumption of the lake being emptied during the 22 winter? 23 MR. ROY: Eric, do you want to comment 24 on it? 25 MS. AUTUT: Thank you for the question, 26 Joadamee.</p>	<p style="text-align: right;">160</p> <p>1 Bhabesh? 2 MR. ROY: Yes. I'm asking Eric and Tony 3 to add some points. 4 MR. BELL: Thank you very much, Bhabesh. 5 From what you're describing, I understand that the 6 spring runoff hasn't been as excessive as it has been 7 historically. And if it isn't flowing over the road as 8 much as it has in past years, your question is, over 9 the course of the winter, did we deplete the lake to 10 the point where perhaps it needed extra to fill up. 11 At this particular point, I can't answer that 12 question, but I can make a few suggestions that, more 13 than likely, the -- the lack of overflow from the lake 14 could potentially be due to changes in how the snow is 15 falling and how the snow has been ploughed. I only say 16 that because in my brief period here in Resolute, 17 I've -- I've noticed a big change in the last eight 18 years about how extensive the snow removal has been. 19 So I could offer that. 20 The other thing would be if anything has changed 21 with regards to how much melt would be going into the 22 lake, and I don't think anything's changed there. 23 So your question is very interesting, and I think 24 if it were to warrant anything, it would be to talk to 25 someone who is an expert in hydrology or looking at 26 that immediate lake and how the water moves around that</p>

<p style="text-align: right;">161</p> <p>1 lake.</p> <p>2 I -- I wish I could provide a better answer for</p> <p>3 you. It's a -- it's a very interesting question,</p> <p>4 and -- but at this stage, I don't really have a solid</p> <p>5 answer for you.</p> <p>6 Tony, is there anything you think we should add to</p> <p>7 that?</p> <p>8 MR. WHALEN: Thanks, Eric.</p> <p>9 Yeah, I -- I'm not sure I can add to that. The</p> <p>10 only thing I wondered is that when the utilidor was</p> <p>11 upgraded in 2015, it is possible that additional</p> <p>12 culverts were put in place that would prevent the road</p> <p>13 from washing out like it did historically. But I -- I</p> <p>14 wasn't involved in any of that project back then, so I</p> <p>15 can't know for certain. But it's a possibility that</p> <p>16 there was additional culverts installed to -- to move</p> <p>17 that water under the roads as opposed to washing them</p> <p>18 out.</p> <p>19 Thank you, Mr. Chair.</p> <p>20 MS. AUTUT: Okay. Thank you to the</p> <p>21 Applicant.</p> <p>22 Joadamee, next question.</p> <p>23 JOADAMEE IQALUK: Yeah. I -- yeah. I used to</p> <p>24 run this utilidor system, and all these units, they</p> <p>25 used to have little quarter-inch lines, quarter-inch.</p> <p>26 Why are they 1 inch now? Like, that -- that's a big</p>	<p style="text-align: right;">162</p> <p>1 jump from a size of a hose. I mean, a quarter inch to</p> <p>2 1 inch, that's three quarters difference; that's three</p> <p>3 times the mark of consumptions too. So, you know,</p> <p>4 there's a lot being wasted there too because we used to</p> <p>5 have little quarter-inch lines in the units, but now</p> <p>6 they're 1 inch.</p> <p>7 MS. AUTUT: Okay. Thank you, Joadamee.</p> <p>8 Applicant. Bhabesh?</p> <p>9 MR. ROY: I think -- thank you for this</p> <p>10 question. I think he's talking about the lateral line.</p> <p>11 The -- the lateral line is not the -- part of the</p> <p>12 utilidor system. It has been built according --</p> <p>13 JOADAMEE IQALUK: (INDISCERNIBLE)</p> <p>14 (SIMULTANEOUS CROSSTALK)</p> <p>15 MR. ROY: -- to the housing, private or</p> <p>16 not, they -- their own connection. It has nothing to</p> <p>17 do with the utilidor system.</p> <p>18 JOADAMEE IQALUK: Actually, it does. Because</p> <p>19 the bleed line used to be a quarter of an inch; now</p> <p>20 it's 1 inch, so that is three times the amount of water</p> <p>21 going through the drain system.</p> <p>22 MR. ROY: Okay. So I think --</p> <p>23 JOADAMEE IQALUK: I know for a fact because I</p> <p>24 was helping maintain that.</p> <p>25 MS. AUTUT: Okay. Just point --</p> <p>26 MR. ROY: Yeah. Eric or --</p>
<p style="text-align: right;">163</p> <p>1 MS. AUTUT: Point of order. Bhabesh?</p> <p>2 MR. ROY: -- Tony to answer this</p> <p>3 question.</p> <p>4 MS. AUTUT: Okay. So great questions. I</p> <p>5 just need to ask that we not talk over each other. Let</p> <p>6 each other respond to the questions on the floor.</p> <p>7 So, Bhabesh, if you could respond, please.</p> <p>8 MR. ROY: Yes. I'm asking the technical</p> <p>9 support from Tony and Eric.</p> <p>10 MS. AUTUT: Eric.</p> <p>11 MR. BELL: Okay. Thank you, Bhabesh.</p> <p>12 If we're talking about the bleed lines</p> <p>13 specifically, okay, that are a full 1 inch in diameter,</p> <p>14 that is -- you're quite right; that is a large amount</p> <p>15 of flow. There must be incorporated into the original</p> <p>16 design some sort of throttling that would be on those</p> <p>17 1-inch lines, whether it's a valve or a pinch in the</p> <p>18 pipe or -- it should be an adjustable needle valve, is</p> <p>19 what I would assume it would be, and that should make</p> <p>20 the flow rate adjustable from either a high rate to a</p> <p>21 low rate on those 1-inch lines.</p> <p>22 I think the justification for going to a larger</p> <p>23 line is that the -- it would have a little bit more</p> <p>24 heat in it, and it wouldn't potentially freeze off so</p> <p>25 quickly if there was an accident where the -- the water</p> <p>26 stopped flowing through it, and the permafrost could</p>	<p style="text-align: right;">164</p> <p>1 really take hold. I believe that's the design, why</p> <p>2 they went with the larger one. But, of course, having</p> <p>3 to be able to throttle it with a smaller valve is</p> <p>4 likely what the -- what the impact is on that big line</p> <p>5 and how they address that.</p> <p>6 MS. AUTUT: Okay. Thank you, Eric.</p> <p>7 Joadamee, any further questions?</p> <p>8 JOADAMEE IQALUK: Yeah. So what you're saying</p> <p>9 is that the circulation pump is no use?</p> <p>10 MS. AUTUT: Eric.</p> <p>11 MR. BELL: No, I'm not saying the</p> <p>12 circulation pump is no use. It's very useful. Because</p> <p>13 if we don't have that small amount of pressure, then</p> <p>14 we'll never get any water back up the hill.</p> <p>15 JOADAMEE IQALUK: Okay.</p> <p>16 MS. AUTUT: Thank you.</p> <p>17 To the floor, any further questions?</p> <p>18 Tabitha.</p> <p>19 TABITHA MULLIN: Thank you. Do I say my name</p> <p>20 again? No? Tabitha Mullin here.</p> <p>21 Just looking at this historical water extraction</p> <p>22 volume. In 2015, we had a big jump of water</p> <p>23 consumption, but in the quantity of water requested,</p> <p>24 it's a very gradual increase by ten-year increments and</p> <p>25 just wondering if we should get that much -- I think</p> <p>26 that was the year when the military was here for their</p>

<p style="text-align: right;">165</p> <p>1 big exercise, and so we had a lot -- a lot of military 2 personnel and all the others. 3 If that has been put into -- to any thought, if 4 Resolute should do another exercise of some similar 5 thing in the future? Thank you. 6 MS. AUTUT: Thank you, Tabitha. 7 I'll pose that question to Bhabesh. If you would 8 like to address that, please. 9 MR. ROY: Yes. Your concerns might be 10 partially right, not totally right. You see the water 11 extraction volume 2015 and 2016. 2015 is the highest 12 in the last -- last five years, and then next highest 13 is 2016. So prior to upgrading to the utilidor system, 14 there was a massive leak here and there. All the walls 15 are flooding almost everywhere, every -- each and every 16 section of the town. 17 So there is a leakage. The water is coming. 18 Water is leaking through to the road and running to the 19 sea. There is a waste of water. So there is the 20 leak water, the -- leak through the pipes, leak through 21 the sewer line, water line, et cetera, et cetera. So 22 that's why we had to pump out the excessive amount of 23 water to satisfy the demand and, you know, considering 24 the loss. 25 Now, 2016, also, the figure is very high because 26 once we repaired the leak, we need to do the test of</p>	<p style="text-align: right;">166</p> <p>1 the pipe. We call it -- in engineering science, it is 2 called "hydraulic test", to see if there is any leak in 3 a pipe anywhere, any joint, or anywhere. So that's why 4 we have to fill the pipe and keep the pipe for -- you 5 know, hours, just totally water inside. So the very 6 reason we have to take the excessive amount of water 7 from Char Lake. 8 So these are the two reason. One for the leak 9 purposes. We need sufficient water to do the hydraulic 10 test, 2016. And 2015, as I say, there is a huge, huge 11 amount of leak. In the history of utilidor system, 12 this year there was a maximum water loss. 13 Now, in addition, probably -- I can't remember -- 14 there might be a significant amount of military 15 presence who is actually -- it's not in my record. You 16 might be correct. Thank you. 17 MS. AUTUT: Thank you, Bhabesh. 18 Tabitha, does that answer your question? 19 TABITHA MULLIN: Tabitha Mullin. 20 Yes, you're right. I forgot about that water leak 21 big time. We had trouble keeping it off the roads and 22 stuff like that. Sorry for -- I -- no, not sorry. I'm 23 thankful for his answer. Thank you. 24 MS. AUTUT: Thank you, Tabitha. 25 Any further questions? If not, I'll propose a 26 ten-minute break for folks to get a snack, a coffee,</p>
<p style="text-align: right;">167</p> <p>1 and -- and a health break, and then we'll come back, 2 and we'll expect a presentation from CIRNA. Thank you. 3 (ADJOURNMENT) 4 MS. AUTUT: Okay. Thank you. So moving 5 on, we've got a presentation from Crown-Indigenous 6 Relations and Northern Affairs, so I'll hand the mic 7 over to Sarah and Godwin. 8 Presentation By Crown-Indigenous Relations and Northern 9 Affairs (Community Session) 10 MR. OKONKWO: Thank you, Stephanie. (OTHER 11 LANGUAGE SPOKEN) 12 So I'm Godwin Okonkwo, manager water resources, 13 Crown-Indigenous Relations and Northern Affairs Canada, 14 and I'm joined here by Sarah Forte. She's a water 15 management specialist for the office, and she's the 16 lead -- the expert lead on this file. 17 I'd like to thank the Nunavut Water Board for the 18 opportunity to make a presentation regarding the 19 Government of Nunavut, Community and Government 20 Services application to renew and amend this 21 3BM-RUT1520 water licence as a Type "A" licence. 22 On behalf of Crown-Indigenous Relations and 23 Northern Affairs Canada, I'd like to thank the Hamlet 24 of Resolute Bay for welcoming us to their beautiful 25 community. I would also like to thank -- to 26 acknowledge the Nunavut Water Board for their work in</p>	<p style="text-align: right;">168</p> <p>1 facilitating this licence application review process 2 and the Government of Nunavut, Community and Government 3 Services efforts to respond to our questions and 4 concerns. 5 So throughout this presentation, I will refer to 6 Crown-Indigenous Relations and Northern Affairs Canada 7 as "the department", and I will refer to Government of 8 Nunavut, Department of Community and Government 9 Services as "the applicant". 10 So the -- so I -- I will just go ahead to list 11 a -- as where the department has made contributions in 12 this water licence amendment and renewal process. So 13 some of the key areas that we have provided comments on 14 include, Number 1, the scope and term of the licence; 15 Number 2, compliance; Number 3, water supply; Number 4, 16 wastewater treatment; Number 5, management plans and 17 reports; Number 6, monitoring; and Number 7, closure 18 and reclamation planning. 19 So the department has a broad mandate for 20 comanagement of water -- freshwater resources and the 21 management of Crown land in Nunavut under the Acts and 22 Regulations listed on the slide, as well as the Nunavut 23 Agreement. The department administers and enforces 24 regulatory authorizations that pertain to Nunavut Crown 25 land and freshwater resources. So the department 26 participates in water licence processes administered by</p>

<p style="text-align: right;">169</p> <p>1 the Nunavut Water Board, along with other interested 2 parties, usually by providing technical advice and 3 expertise for the Board's consideration in their 4 decision. 5 So the -- the contributions that the department 6 has made in this process -- thank you to the 7 Water Board. When he did his presentation, I think he 8 mentioned all the dates, so I'll just say from -- from 9 March -- so the department has made submissions, 10 comments, and recommendations from March 26th to 11 September 24th, and the department has participated in 12 technical meetings, the prehearing conference, and 13 we're participating now in this public hearing. 14 So I'll start with the first comment we had; it 15 was in the scope and term of the licence. So on 16 August 4, 2020, the Applicant submitted their -- an 17 updated renewal of the application requesting a 20-year 18 licence term, and the department supports these 19 requests. We understand that during this 20 years 20 there will likely be amendments, including potential 21 incorporation of facilities currently under -- licensed 22 under 3BM-RES2025, which covers the solid waste 23 facilities. 24 So at this point, I will call on Sarah to do some 25 of the rest of the technical presentations. 26 MS. FORTE: Thank you, Godwin.</p>	<p style="text-align: right;">170</p> <p>1 So this next slide is about compliance. The 2 recently expired licence for the Resolute Bay utilidor 3 had several conditions which were not met during the 4 term of the licence, and they can be divided into four 5 topics: first, monitoring water quantity at the intake 6 and the outfall; the second is the annual authorized 7 water use; the third was a study to determine fecal 8 coliform limit for the effluent from the macerator 9 building; and the fourth was updated operation and 10 maintenance manuals. 11 So in all these topics we've had discussions, and 12 we've -- the department is of the opinion they are 13 being addressed during this renewal application. 14 Next slide. 15 Next topic we touched on was water supply. So as 16 mentioned just earlier this evening, this hamlet's 17 water source is Char Lake, and Eric showed a cartoon 18 with a -- different system components and showed how 19 they worked together. The department had three 20 technical comments that have all been resolved. The 21 first was about the quantity of water requested. We 22 wanted to make sure that the -- there was enough water 23 for the hamlet's needs and also that the lake -- not 24 too much water was being taken out of the lake that it 25 wouldn't get filled up again every year. 26 We also had comments about plans for the pump</p>
<p style="text-align: right;">171</p> <p>1 house that is currently being built -- or up -- 2 upgraded, and we also spoke about leaks in the laterals 3 of the utilidor. And all these questions, we've -- 4 we've sorted through them, and our concerns are 5 addressed. 6 We also spoke about wastewater treatment. So, 7 currently, wastewater collected by the utilidor passes 8 through a macerator to remove the solids before being 9 discharged in the ocean, and as discussed earlier this 10 evening, a new wastewater treatment plant is in the 11 predesign stage for construction in 2024. And because 12 the Applicant has committed to providing plans for the 13 wastewater treatment plant before they construct it, 14 the department is satisfied with this commitment. 15 Do you want to -- okay. I'll keep going. 16 All right. So management plans and operation and 17 maintenance manuals describe how concepts and 18 strategies will be implemented, and reviewing them 19 allows us to understand what actions will be taken by 20 people on the ground to make sure things work as 21 planned to protect the water. And the department had 22 comments on three -- the three bullets listed here, 23 some operation and maintenance manuals. There's the 24 spill contingency plan and quality assurance and 25 quality control plan, and deficiencies noted in these 26 manuals have been corrected, or, alternatively, some</p>	<p style="text-align: right;">172</p> <p>1 manuals have not yet been provided because the 2 infrastructure is still undergoing upgrades, but we 3 know when the new manuals will be provided based on the 4 timing of commissioning. 5 Next one. 6 Okay. We also had one comment regarding 7 monitoring. The water licence has instructions on 8 where to take water quality samples and how often. One 9 of the places is the sewage outfall to the ocean, and 10 the -- the currently expired licence requires a sample 11 every month, which is difficult to do. And because we 12 have five years of data, we can see what we can expect, 13 and it doesn't change very much, and so we are 14 suggesting that maybe sampling a bit less frequently 15 would be -- give us the same information, and we ask 16 the Board to consider this. 17 Next one. 18 And this was the last topic which -- for which we 19 had comments, the closure and reclamation planning, so 20 that's basically how we clean things up when -- when we 21 no longer use a building. So, for example, they are 22 building a new pump station. Well, what will we do 23 with the old pump station? You need a plan of how you 24 will clean that up. And the Applicant has provided 25 to -- committed to providing these plans as -- when 26 they -- they -- the new facility is built, then -- and</p>

<p style="text-align: right;">173</p> <p>1 commissioned and they know it's working well, then they 2 will provide a plan to clean up the old building, which 3 is good. 4 Pardon me? Okay. 5 So, in conclusion, we'd like to say that the 6 department supports the Government of Nunavut's renewal 7 application and recommends that it be accepted with due 8 consideration given to our comments. 9 And next slide. 10 And we'd be happy to answer questions. 11 MS. AUTUT: Thank you, Sarah and Godwin, 12 for your presentation. 13 So we'll put it to the floor. Does anyone have 14 questions for CIRNAC and the -- the responsibility they 15 have to this file? 16 Joadamee. 17 The Community Questions Crown-Indigenous and Northern 18 Affairs Canada (Community Session) 19 JOADAMEE IQALUK: This is about the consumption 20 of water; right? Were you guys aware -- aware that our 21 lake was maxed out a couple of times? 22 MS. AUTUT: Thank you for that question. 23 CIRNA? 24 MS. FORTE: I -- I don't think I 25 understand what you mean by "maxed out". 26 JOADAMEE IQALUK: The water was pumped right</p>	<p style="text-align: right;">174</p> <p>1 maxed. We were on the last few -- few feet in the tank 2 in the recent couple years, and our -- literally it was 3 drained right out to the pump. I'm wondering if you 4 guys were ever aware of that? 5 MS. AUTUT: Okay. CIRNAC. 6 MS. FORTE: So it was the lake that was or 7 the tank? 8 JOADAMEE IQALUK: The lake was pumped to the 9 max, drained to the max, 40 feet. That's pretty deep. 10 And we are on last 10 feet of water in our tank until 11 the -- until the snow melted and drained into the lake. 12 That -- that spring runoff really saved us. So it is 13 natural for our lake to run off over through the road 14 because we were pumped to the max, 40 feet. 15 MS. AUTUT: Okay. Thank you for that 16 question. Can I just ask that all parties state their 17 name when they're responding to the questions for the 18 benefit of the court reporter. 19 So, Sarah, I'll hand the mic back to you if you 20 wish to respond. 21 MS. FORTE: So Sarah speaking here. 22 Thanks for that comment. No, I wasn't aware that 23 the lake was pumped out to the max. 24 MS. AUTUT: Thank you, Sarah. 25 Did the Applicant wish to respond to that at this 26 point? Bhabesh?</p>
<p style="text-align: right;">175</p> <p>1 MR. ROY: I don't think that the lake is 2 pumped out to the max. I don't think so. Because it 3 has a catchment area, and every end of the wintertime, 4 the snow melted out, and the water is coming down to 5 the lake. So it's not maximum pumping out. But, 6 eventually, as population going up and, as you'll see, 7 our chart of the demand, we need to extract more amount 8 of water for 50 years. 9 MS. AUTUT: Okay. Thank you. 10 Any further questions from the floor? 11 JOADAMEE IQALUK: Yes. Joadamee Iqaluk here 12 again. 13 It was pumped out to the max because I seen an 14 actual hose going through the ice, another added line 15 to go to the water to go past the pipe. I don't know 16 if anybody's ever aware that our lake does get pumped 17 out to the max, but nobody wants to believe. I see it. 18 I see the -- I see the water hoses going through the 19 ice during that time of the year. 20 MS. AUTUT: Okay. Thank you, Joadamee, 21 for that comment. That is noted on the record, okay, 22 for the Board's consideration of the transcript. 23 Any other questions? If not, thank you, CIRNA, 24 for your presentation. 25 We will now move on to Environment and Climate 26 Change Canada, who is on the -- on the screen. If we</p>	<p style="text-align: right;">176</p> <p>1 can get their presentation up. 2 Anna, it's my understanding you'll be sharing your 3 presentation. 4 MS. GRAHAM: Yes. This is Anna Graham, 5 Environment and Climate Change. I will just be a 6 moment here. Can my screen be seen? 7 MS. AUTUT: We can see your name, and 8 that's it. 9 MS. GRAHAM: Okay. There we go. Can you 10 see it now? 11 MS. AUTUT: Yes. Please proceed. 12 Presentation by Environment and Climate Change Canada 13 (Community Session) 14 MS. GRAHAM: Okay. Thank you. 15 Good evening, everyone, and thank you for this 16 opportunity to present. My name is Anna Graham, and I 17 am an environmental assessment coordinator with 18 Environment and Climate Change Canada. Also on Zoom 19 here with me today is our water quality analyst, Meagan 20 Tobin. 21 I will start by just reviewing what our 22 presentation will cover, including the general role of 23 Environment and Climate Change Canada or the -- also 24 the department's mandate, and I will touch on the Acts 25 and legislation that are relevant to Environment and 26 Climate Change Canada and the Acts that have guided our</p>

<p style="text-align: right;">177</p> <p>1 review of this application. Meagan will take over 2 after I go through the mandate and Acts and will -- she 3 will outline the comments and recommendations that we 4 provided regarding the Type "A" water licence 5 application. 6 The mandate of Environment and Climate Change 7 Canada is to preserve and enhance the quality of the 8 natural environment, including water, air, soil 9 quality, and to conserve Canada's renewable resources, 10 including migratory birds, to protect Canada's water 11 resources; to forecast daily weather conditions; to 12 enforce regulations; and to coordinate environmental 13 policies and programs for the federal government. 14 Environment and Climate Change Canada has been 15 involved in the water licence application as a reviewer 16 and commenter. Throughout the process, we have 17 provided comments on different aspects of the technical 18 application details. Our involvement in this 19 application is in accordance with the mandate of 20 Environment and Climate Change Canada. 21 The mandate is formed and governed by various 22 Acts, including those listed here: The Department of 23 the Environment Act, Canadian Environmental Protection 24 Act, the pollution prevention parts of the Fisheries 25 Act, and the Migratory Birds Convention Act, and the 26 Species-At-Risk Act.</p>	<p style="text-align: right;">178</p> <p>1 I will now pass the presentation over to Meagan to 2 summarize our technical comments. 3 MS. TOBIN: Thank you. 4 So I will speak to the comments that were provided 5 in our final submission. The first of which relates to 6 the new water -- wastewater treatment plant. So 7 Environment Canada have requested additional details 8 related to treatment targets for the new water -- 9 wastewater treatment plant, as well as monitoring. 10 In response, the Applicant has indicated that the 11 new plant will be designed to be capable of meeting the 12 limits of the Federal Southern Wastewater Effluent 13 Regulations and has made commitments for toxicity 14 testing as well as submission of effluent data, and so 15 Environment and Climate Change Canada considers these 16 comments to be resolved. 17 So related to fecal coliforms: As part of the 18 submission for renewal, the Applicant referenced a 19 fecal coliform study that was not initially provided 20 for review, and, therefore, Environment and Climate 21 Change Canada recommended that this information be 22 provided to all reviewers. The Applicant has provided 23 this analysis, and Environment and Climate Change 24 Canada has no further comments on this document as 25 compliance limits for fecal coliforms is primarily 26 related to human health and therefore falls outside of</p>
<p style="text-align: right;">179</p> <p>1 the mandate of our department. 2 We also have comments related to management plans, 3 specifically the quality assurance and quality control 4 program, as well as the spill contingency plan. In 5 response, the Applicant has updated these plans in 6 accordance with our recommendations and addressed 7 several errors that were identified, so Environment and 8 Climate Change Canada also considers these comments to 9 be resolved. 10 Finally, as an outcome of ongoing discussions, the 11 Applicant provided an environmental management plan for 12 the construction of the Char Lake pump house and the 13 Signal Hill water treatment plant. This plan includes 14 measures to prevent erosion and sedimentation. The 15 Environment and Climate Change Canada did note that 16 there was no description of water quality monitoring 17 and therefore recommended additional information on any 18 proposed monitoring. 19 Earlier in the hearing today, clarification was 20 provided by the Applicant on the turbidity monitoring 21 associated with the in-water construction, and, 22 therefore, Environment and Climate Change Canada 23 considers this comment to be resolved pending turbidity 24 monitoring being described in an update to the 25 environmental management plan. 26 That is all of the comments that we had in our</p>	<p style="text-align: right;">180</p> <p>1 final submission, so I thank you for the opportunity to 2 participate, and I will now take any questions. 3 MS. AUTUT: Thank you, Meagan and Anna, 4 for the presentation. 5 Are there any questions from the floor related to 6 the Environment Canada [sic] Climate Change 7 presentation? Okay. Any questions from any other 8 party or the Board? 9 If not, I understand the staff have one request 10 for clarification, Sergey? 11 Nunavut Water Board Staff Questions Environment and 12 Climate Change Canada (Community Session) 13 MR. KUFLEVSKIY: Thank you, Stephanie. This is 14 Sergey from the Water Board. 15 I just wanted to ask for a clarification from the 16 Environment and Climate Change Canada with respect to 17 the fecal coliform study that was done and submitted to 18 the Water Board. 19 From our understanding, this was submitted as a 20 follow-up to the expired licence. This was a condition 21 in the expired Type "B" licence. That's why this 22 information was requested and provided, and it is only 23 applicable to the sewage that is currently being 24 disposed from the utilidor system. 25 So now the question is, once the wastewater 26 treatment plant is finished, when it's ready and</p>

<p style="text-align: right;">181</p> <p>1 operational, from our understanding, the fecal 2 coliforms are, like, definitely -- they can be -- they 3 can present a risk to human health, but there's no 4 specific regulations in the -- no specific -- specific 5 wastewater treatment regulations for municipalities. 6 And the question is -- under existing regulations. So 7 the question is how would it -- Environment and Climate 8 Change Canada -- what would be the view of the 9 Environment and Climate Change Canada on this aspect? 10 Thank you. 11 MS. TOBIN: Thank you for the question. I 12 will respond, and I'll also allow Meagan to correct me 13 or add on if -- if I miss anything. 14 My understanding is that this -- because this is a 15 human health concern, Environment and Climate Change 16 Canada would defer to the expertise that could be 17 provided by a different department. 18 Meagan, would you like to confirm that. 19 MS. TOBIN: Hi. Meagan Tobin, Environment 20 and Climate Change Canada. 21 So Anna is correct. As you mentioned, Sergey, 22 the -- there's no federal regulation related to 23 wastewater that outlines fecal coliform limits, and as 24 fecal coliform concentrations are primarily related to 25 human health, we would -- as Anna said, we would defer 26 to the expertise of departments that have a mandate</p>	<p style="text-align: right;">182</p> <p>1 for -- for human health. 2 MR. KUFLEVSKIY: Thank you, Meagan. Thank you, 3 Anna. This answers my question. 4 MS. AUTUT: Thank you, all. 5 Any other questions for Environment and Climate 6 Change Canada? If not, thank you, ladies, for your 7 presentation. 8 At this time, Mr. Chair, I'd like to return the 9 mic to you to close off the community session portion 10 of this public hearing. 11 Closing Remarks (Community Session) 12 THE CHAIR: Thank you, Stephanie, and 13 everyone who attends tonight's community session here 14 in Resolute Bay. Your questions and comments about 15 GN-CGS renewal and amendment application were 16 appreciated by me and also my Panel members, Ross 17 Mrazek and Sakiasie Sowdloapik. 18 On behalf of the Nunavut Water Board, I would also 19 like to thank the Applicant and interveners for their 20 presentation and answers to questions from the members 21 of the public here tonight. 22 Special thanks to all the community members of 23 Resolute Bay for sharing their real stories and 24 information with the Panel and the participants and 25 contributing to a productive and respectful community 26 session.</p>
<p style="text-align: right;">183</p> <p>1 The community session is now adjourned. Let's 2 stand, say -- say a prayer, closing prayer. 3 Closing Prayer (Community Session) 4 THE CHAIR: We'll take a five-minute 5 break, and then we'll continue with our -- today's 6 actual public hearing agenda. 7 Community Session Concluded 8 (ADJOURNMENT) 9 Discussion 10 THE CHAIR: Okay. We will start -- 11 reconvene from today's -- with today's agenda. Before 12 we go to agenda, I'd like to have legal counsel take 13 the housekeeping. 14 MS. MEADOWS: Thank you, Mr. Chair. Teresa 15 Meadows, legal counsel for the Nunavut Water Board. 16 Mr. Chair, I have a couple of procedural matters, 17 and then there are deferred questions from this 18 afternoon that are going to be responded to by the 19 Government of Nunavut, Community and Government 20 Services. 21 So the first housekeeping matter, Mr. Chair, is 22 that we received the community presentation that was 23 provided by the Government of Nunavut, Community and 24 Government Services in electronic form only, so we have 25 marked that as the -- as the next exhibit in the public 26 hearing.</p>	<p style="text-align: right;">184</p> <p>1 And, in addition -- I forgot to mention before the 2 Nunavut Water Board presented that I had also marked 3 their presentation as an exhibit as well, so those two 4 exhibits have been marked in the proceedings for the 5 public hearing. 6 EXHIBIT 11 - Nunavut Water Board community 7 session presentation regarding a new Type "A" 8 Water Licence 3AM-RUT--- Hamlet of 9 Resolute Bay utilidor system (English/Inuktitut) 10 EXHIBIT 12 - GN-CGS community session 11 PowerPoint presentation for the Type "A" 12 Water Licence application of the Resolute Bay 13 utilidor system (English) 14 MS. MEADOWS: And, Mr. Chair, it's my 15 understanding that the technical staff have been 16 provided with some of the responses that will be 17 presented by the Government of Nunavut, Community and 18 Government Services in electronic form, and we'll mark 19 those two as the next exhibits following the 20 presentation of the response to deferred questions by 21 the Government of Nunavut, Community and Government 22 Services. 23 So thank you, Mr. Chair. Those are all my 24 procedural matters. 25 EXHIBIT 13 - Electronic copy of the 26 Resolute bleed water clarification memo</p>

<p style="text-align: right;">185</p> <p>1 dated October 27, 2020 (English)</p> <p>2 EXHIBIT 14 - Electronic copy of email from</p> <p>3 Daryl Burke sent October 27, 2020, at 5:29 PM</p> <p>4 to Roy, Bhabesh, Subject: RE: Outstanding</p> <p>5 Issues for RB WLs (English)</p> <p>6 THE CHAIR: Thank you.</p> <p>7 Now, we turn to our opportunity for each of the</p> <p>8 parties to provide us with brief closing remarks --</p> <p>9 okay. Before we're doing that? Okay. Go ahead.</p> <p>10 MS. MEADOWS: Thank you, Mr. Chair. Teresa</p> <p>11 Meadows, legal counsel for the Nunavut Water Board.</p> <p>12 Mr. Chair, I believe the Community and Government</p> <p>13 Services, Bhabesh, would like to follow up with respect</p> <p>14 to those answers to Sergey's three questions that were</p> <p>15 still outstanding first. Thank you, Mr. Chair.</p> <p>16 THE CHAIR: Okay. Yeah. I completely</p> <p>17 forgot it right away, immediately. I think I'm still</p> <p>18 rushing to get this done. Anyway, continue.</p> <p>19 So we need the answers, CGS. Bhabesh, you are --</p> <p>20 you still online?</p> <p>21 MS. AUTUT: Thank you, Mr. Chair.</p> <p>22 Stephanie Autut, Nunavut Water Board.</p> <p>23 Bhabesh, the floor is yours, please, to respond to</p> <p>24 the deferred questions from earlier today.</p> <p>25 MR. ROY: Actually, my -- I was on mute.</p> <p>26 I did not hear the question. Can you please -- can I</p>	<p style="text-align: right;">186</p> <p>1 request to repeat the question again for me.</p> <p>2 MR. KUFLEVSKIY: Hi, Bhabesh. This is Sergey</p> <p>3 from the Water Board. Mr. Chair and Stephanie</p> <p>4 basically asked you to follow up on the deferred</p> <p>5 questions that the Water Board asked you during the --</p> <p>6 earlier during the hearing today. And from my</p> <p>7 understanding, you would like Eric to respond to these</p> <p>8 three questions that were asked before and that you</p> <p>9 provided an electronic answer to us already.</p> <p>10 Is this correct?</p> <p>11 MR. ROY: Yes. Thank you, Sergey. Yes.</p> <p>12 I am requesting Eric to go over those questions</p> <p>13 answered by Tony and Daryl -- Daryl Burke.</p> <p>14 Eric, please.</p> <p>15 Response to Deferred Questions by Government of</p> <p>16 Nunavut, Community and Government Services</p> <p>17 MR. BELL: Thank you very much, Mr. Roy.</p> <p>18 There was a question that was asked about the</p> <p>19 reported concentrations for the wastewater influent</p> <p>20 characteristics for design and whether or not this</p> <p>21 included both the town and the airport sites.</p> <p>22 So the response is as follows: Based on the</p> <p>23 current data that we have, we believe the</p> <p>24 concentrations for design reported in the EXP technical</p> <p>25 memo dated March 20th, 2020, to be reflective of the</p> <p>26 combined wastewater from both the town and the airport</p>
<p style="text-align: right;">187</p> <p>1 sites. The recommended values of BOD and TSS were</p> <p>2 110 milligrams and 125 milligrams respectively.</p> <p>3 These concentrations were recommended based on the</p> <p>4 current flow data we have available. With the</p> <p>5 installation of the new flow meter, we anticipate that</p> <p>6 we will have access to better flow data which may</p> <p>7 change both our future wastewater flows and</p> <p>8 concentration values for design. This would be</p> <p>9 revisited and recalculated prior to preceding --</p> <p>10 proceeding to the detailed design after better flow</p> <p>11 data is established. As a point of comparison, the</p> <p>12 highest values we have seen in 2019 sample data on the</p> <p>13 raw wastewater for BOD and TSS were 18 and</p> <p>14 35 milligrams respectively.</p> <p>15 Okay. There was another question asked about the</p> <p>16 proposed size of the wastewater treatment plant</p> <p>17 facility. Our response is: A conceptional building</p> <p>18 size of 36 metres by 30 metres has been proposed.</p> <p>19 Based on current conceptual treatment process sizing,</p> <p>20 this would house all mechanical and biological</p> <p>21 treatment equipment, as well as other support spaces</p> <p>22 such as labs, office, washroom, and maintenance area.</p> <p>23 Okay. There was a third question that related to</p> <p>24 the amount of bleed water that was being utilized in</p> <p>25 the utilidor and how we forecasted that moving forward.</p> <p>26 It was a question as to the total percentage of water</p>	<p style="text-align: right;">188</p> <p>1 extracted compared -- when comparing 2020 to 2030 to</p> <p>2 2040.</p> <p>3 The reason for the different percentages is a</p> <p>4 simple rounding error. This table that has been</p> <p>5 included has two decimal places added in -- this is the</p> <p>6 digital response so that you can see what the actual</p> <p>7 values are to more decimal places.</p> <p>8 We would expect that there would be some</p> <p>9 degradation of the utilidor, sagging, minor leaks,</p> <p>10 et cetera, over time. As the wastewater collection</p> <p>11 system gets older, it will require more and more bleed</p> <p>12 water. Bleed water flow into the sewage collection</p> <p>13 system network is required to offset the heat loss from</p> <p>14 the piping. It was initially estimated at 1.8 litres</p> <p>15 per second in 2020 and rises to 3 litres per second at</p> <p>16 the end of the design period.</p> <p>17 Those are our responses to the three questions.</p> <p>18 Is there any other questions you'd like to talk about,</p> <p>19 Sergey, or -- or is that the three?</p> <p>20 MR. KUFLEVSKIY: Thank you, Eric. This</p> <p>21 addresses -- this information addresses my questions.</p> <p>22 Thank you, Mr. Chair.</p> <p>23 THE CHAIR: Thank you.</p> <p>24 Teresa.</p> <p>25 MS. MEADOWS: Thank you, Mr. Chair. So that</p> <p>26 concludes all of the outstanding matters and all of the</p>

<p style="text-align: right;">189</p> <p>1 housekeeping matters that I had, Mr. Chair. 2 Thank you. 3 THE CHAIR: Thank you. Now get back to 4 the agenda. 5 Now, we took the opportunity for each of the 6 parties to provide us with brief closing remarks 7 starting with the interveners and ending with the 8 Applicant, closing remarks. Start with 9 Crown-Indigenous and Northern Affairs Canada. 10 Closing Remarks by Crown-Indigenous and Northern 11 Affairs Canada 12 MR. OKONKWO: Thank you, Mr. Chair. Again, 13 my name is Godwin Okonkwo, Crown-Indigenous Relations 14 and Northern Affairs Canada. 15 On behalf of Crown-Indigenous Relations and 16 Northern Affairs Canada, I would like to thank the 17 Nunavut Water Board for the opportunity to participate 18 in the renewal and amendment of the 3BM-RUT1520 water 19 licence as a Type "A" water licence. I would also like 20 to thank the hamlet of Resolute Bay for welcoming us 21 and for their participation in the community session. 22 And, finally, I would like to thank the Government of 23 Nunavut, Community and Government -- CGS, Community and 24 Government Services, for their application and their 25 efforts to respond to our concerns. 26 CIRNAC recommends that the -- the renewal</p>	<p style="text-align: right;">190</p> <p>1 application be accepted with due considerations to our 2 comments and our final recommendations. 3 Thank you. Qujannamiik. 4 THE CHAIR: Thank you, CIRNAC. 5 All right. I'd like to call Environment and 6 Climate Change Canada for your closings remarks. 7 Closing Remarks by Environment and Climate Change 8 Canada 9 MS. GRAHAM: This is Anna Graham, 10 Environment and Climate Change Canada. 11 Thank you, Mr. Chair. I would like to thank the 12 Water Board for the opportunity to present today. 13 And I would also like to thank the translators and 14 the technical staff at Resolute Bay for making our 15 participation possible today and very smooth, so 16 thank you. 17 Environment and Climate Change Canada has 18 presented comments on the water licence application. 19 Our comments have -- are considered resolved, and we 20 have no further items to bring forward at this time. 21 Thank you. 22 THE CHAIR: Okay. Thank you. 23 Now I'd like to call Applicant to have your -- to 24 have your closing remarks. 25 Closing Remarks by Government of Nunavut, Community and 26 Government Services</p>
<p style="text-align: right;">191</p> <p>1 MR. ROY: Thank you, Mr. Chair. This is 2 the opportunity -- we'll finally -- you are going to 3 conclude our technical meeting and public hearing 4 today. I thank you, the Water Board, and the -- the 5 Chair Members, executives, and the technical advisors, 6 also the IT personnel. 7 I must also thank the citizens of Resolute Bay, 8 the members who attended this meeting and contributed. 9 I must thank our consulting team, Eric, Tony, and 10 Daryl. They are the highest contribution to make our 11 application and today successful. 12 I must appreciate my colleague, Janise Idlout. 13 This is her first time -- appearance in this kind of 14 big -- you know, the meetings and audience. 15 So, finally, thank you very much for accepting my 16 application for 20 years' time. I'm happy, and I'm 17 looking forward getting the licence. Thank you, 18 Chairs, and thank you audience, everyone. Have a good 19 night. 20 Closing Remarks by the Chair 21 THE CHAIR: Thank you. 22 As we bring this public hearing to a -- to a 23 close, on behalf of the Board and my fellow Panel 24 members, I would like to thank all the parties and -- 25 parties who contributed to making this public hearing 26 and community session a success, especially the</p>	<p style="text-align: right;">192</p> <p>1 Applicants, GN-GCS, and their technical representative; 2 interveners, Crown-Indigenous Relations and Northern 3 Affairs and Environment and Climate Change Canada; NWB 4 staff and legal counsel; interpreter, Tapitia 5 Qitsualik; the reporter -- our court reporter, Sara 6 Anderson; sound condition, Ryan -- Ryan Dempster; all 7 the community members for their valued participation in 8 this hearing. 9 Thanks also the caterers and the -- and the Hamlet 10 of Resolute Bay for their outstanding hospitality and 11 patience with the Board. 12 In closing, I would like -- I want to let the 13 parties know that -- what happen next for the 14 application. The Board -- the Board will now close the 15 public hearing record. What this means, that all 16 evidence with regards to the amendments and renewal 17 application is now before the Board, and no further 18 information will be considered by the Panel before they 19 make their decision about the application. 20 Now that the record is closed, the Board will 21 remit the file to the Panel to -- to decide whether or 22 not to grant a Type "A" water licence to GN-CGS. 23 Within 30 days to 45 days after the public hearing 24 record closes, the NWB will issue its record of 25 proceeding and decision to the Minister of Northern 26 Affairs. If the Board decision is to grant the</p>

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<p>1 application, the Board -- the Board will also attach 2 the Minister's approval, a draft of recommended 3 amendments and renewed water licence. That concludes 4 the public hearing component of the Nunavut Water 5 Board's consideration of GN-CGS water licence amendment 6 and renewed application. 7 The Board and I wish to -- wish you all a good -- 8 good evening and safe return travel to -- for all the 9 visitors to Resolute Bay. Let's have a closing prayer 10 for this -- regards to this -- our public hearing. 11 Let's stand. Let's pray. 12 Closing Prayer 13 THE CHAIR: Thank you all. 14 _____ 15 PROCEEDINGS CONCLUDED 16 _____ 17 18 19 20 21 22 23 24 25 26</p>	<p>1 CERTIFICATE OF TRANSCRIPT: 2 3 I, Sara Anderson, certify that the foregoing pages 4 are a complete and accurate transcript of the 5 proceedings, taken down by me in shorthand and 6 transcribed from my shorthand notes to the best of my 7 skill and ability. 8 Dated at the City of Calgary, Province of Alberta, 9 this 12th day of November 2020. 10 11 12 13 <u>Sara Anderson</u> 14 Sara Anderson, CSR(A) 15 Official Court Reporter 16 17 18 19 20 21 22 23 24 25 26</p>