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Reasons for Decision

Issued pursuant to section 54 of the Waters Act

Water Licence Renewal Application for the Diavik Diamonds Project	
Reference/File Number	W2015L2-0001
Applicant	Diavik Diamond Mines (2012) Inc.
Project	Diavik Diamond Mine

Decision from Wek'èezhii Land and Water Board Meeting of

August 26, 2015

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With respect to this Application, notice was given in accordance with section 43 of the *Waters Act* (the Act).¹ There was a public hearing held in association with this Application on May 28, 2015.

1.0 Background

On January 16, 2015, Diavik Diamond Mines (2012) Inc. (DDMI or the Proponent) submitted their application (the “Application”) to renew Water Licence W2007L2-0003 for the Diavik Diamonds Project.² The Diavik Diamonds Project is located on Lac de Gras, NT, and involves the dewatering of inland lakes, the construction of dikes, transferring of water, open pit and underground mining to excavate kimberlite from four kimberlite pipes (A154N, A154S, A418, and A21), and mine closure.

The Application was circulated for public review on January 30, 2015. Reviewer comments were due on the Application by March 4, 2015, and Proponent responses by March 13, 2015. Comments on the Application were received from Environment Canada (EC), Fisheries and Oceans Canada (DFO), Government of the Northwest Territories Environment and Natural Resources (GNWT-ENR), Government of Northwest Territories Lands Department (GNWT-Lands), and Lutsel K’e Dene First Nation (LKDFN). A Technical Session was held on March 23, 2015.

On May 28, 2015, the Board held a Public Hearing in the community of Behchokò, in accordance with Section 41 of the *Waters Act* and section 24 of the MVRMA. The public hearing was advertised throughout the Mackenzie Valley. Written interventions were received from the Environmental Monitoring and Advisory Board (EMAB),³ GNWT-ENR,⁴ GNWT-Lands,⁵ North Slave Metis Alliance (NSMA),⁶ and LKDFN.⁷ DDMI provided a written response to these interventions.⁸ English and Tłıchq translation services were provided at the public hearing. Submissions made and questioning at the hearing were recorded and transcribed.⁹

During the course of the public hearing, DDMI, EMAB, and GNWT-ENR were required to provide one undertaking each (#1, #2, and #3, respectively) to the Board.¹⁰ Responses to the undertakings were submitted to the Board by DDMI,¹¹ EMAB¹² and GNWT-ENR¹³ on June 2, 2015. DDMI requested a

¹ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal - Notice of Application and Public Hearing - Feb 9 15](#)

² See WLWB Online Registry for [Diavik – WL Renewal - Application - Jan 16 15](#)

³ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – EMAB Intervention – May 7 15](#)

⁴ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – GNWT-ENR Intervention – May 7 15](#)

⁵ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – GNWT-Lands Intervention – May 7 15](#)

⁶ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – NSMA Intervention – May 7 15](#)

⁷ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – LKDFN Intervention – May 7 15](#)

⁸ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Intervention – May 12 15](#)

⁹ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing - Transcript – May 28 15](#)

¹⁰ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing - Undertakings – May 28 15](#)

¹¹ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – Undertaking 1 – DDMI - Jun 2 15](#)

¹² See WLWB Online Registry for [Diavik - WL Renewal – Public Hearing – Undertaking 2 – EMAB - Jun 2 15](#)

clarification of the GNWT-ENR response to Undertaking #3 on June 4, 2015.¹⁴ GNWT-ENR provided a written response to the Board addressing DDMI's questions on June 5, 2015.¹⁵

Following the submission of the undertakings, Board staff prepared a Draft Water Licence which was distributed for review on June 19, 2015.¹⁶ When the Draft Licence was distributed, the WLWB clearly indicated that:

- The purpose of the Draft Licence is to allow parties to comment on Board staff's suggested conditions;
- The Board has not made a final decision on the term but has directed Board staff to prepare a Draft Licence that reflects a term that ends prior to, or coincides with, the end of operations. The final decision on the term will be made once all evidence and arguments have been provided to the Board.
- The draft materials are not intended to limit in any way the scope of the parties' closing arguments; and
- The Board is not bound by the contents of the Draft Licence and will make its decision at the close of the proceeding on the basis of all the evidence and arguments filed by all parties.

Comments and recommendations on the Draft Licence were submitted by EC, EMAB, DFO, GNWT-ENR, and GNWT-Lands. DDMI responded to all comments and provided comments of their own on the Draft Licence.

Closing arguments were provided to the Board in writing from Interveners by July 16, 2015, and from the Applicant by July 23, 2015. Parties had an opportunity, in their closing arguments, to review and update their position based on the hearing and to present their final recommendations to the Board. Closing arguments were received from EMAB,¹⁷ NSMA,¹⁸ GNWT-ENR,¹⁹ and LKDFN.²⁰ On July 17, 2015, the Board received a letter from DDMI setting out an objection to portions of EMAB's closing argument on the basis that it included new information.²¹ The Board requested that EMAB review the submission

¹³ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – Undertaking 3 – GNWT - Jun 2 15](#)

¹⁴ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – Undertaking 3 - DDMI follow-up – Jun 4 15](#)

¹⁵ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – Undertaking 3 – GNWT Response to DDMI- Jun 5 15](#)

¹⁶ See WLWB Online Registry for [Diavik – DRAFT Water Licence and Schedule – With Track Changes – June 15 15](#) and [Diavik – DRAFT Surveillance Network Program – With Track Changes – June 15 15](#)

¹⁷ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – EMAB Closing Arguments – Jul 16 15](#)

¹⁸ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – NSMA Closing Arguments – Jul 16 15](#)

¹⁹ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – GNWT-ENR Closing Arguments – Jul 16 15](#)

²⁰ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – LKDFN Closing Arguments – Jul 15 15](#)

²¹ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Objection to EMAB Closing Arguments – Jul 17 15](#)

and provided an opportunity for DDMI to respond.²² On July 21, 2015, EMAB submitted a revised closing argument.²³ DDMI submitted a subsequent letter indicating that it still felt the submission contained new evidence.²⁴ The Board reviewed the EMAB argument and the submissions from both parties and found that the submission contained new evidence. The Board ruled that, in the interest of fairness, it would not consider that information in making its decision.²⁵ On July 23, 2015, DDMI submitted its closing argument to the Board.²⁶

2.0 Decision

After reviewing the submission of the Applicant and the written comments and submissions received by the Board, and having due regard to the facts and circumstances, the merits of the submissions made to it, and to the purpose, scope, and intent of the *Waters Act* and Regulations made thereunder, the Board has determined that Water Licence W2015L2-0001 be issued, subject to the terms and conditions contained therein. The Board's reasons for this decision are set out below.

3.0 General Principles

The scope, definitions, and conditions set forth in the Water Licence have been developed in order to address the Board's statutory responsibilities, its ongoing role in regulation of the operation of the Diavik Diamond Mine and matters that were raised during this licensing proceeding. Out of necessity these Reasons for Decision focus on the major concerns raised by parties including those that were the subject of substantive argument by one or more parties. These Reasons also address evidence which resulted in the inclusion of new or revised conditions (that differ from those in Water Licence W2007L2-0003). All conditions in the Licence are in the Board's view based on the specifics of the Project and the evidence provided to the Board.

All directives issued by the Board under W2007L2-0003 that have not yet been fulfilled by the Licensee, and are not in conflict with or inconsistent with the conditions in Water Licence condition W2015L2-0001, remain in effect under the renewed Licence and must be completed. If there is any doubt about the continued applicability of a directive the Licensee should bring the matter to the Board's attention.

²² See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – WLWB Correspondence re Intervener Closing Arguments and DDMI Submission – Jul 17 15](#)

²³ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – EMAB Closing Arguments - Revised – Jul 21 15](#)

²⁴ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Response to EMAB Revised Closing Arguments – Jul 21 15](#)

²⁵ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – WLWB Ruling re New Evidence – Jul 23 15](#)

²⁶ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Closing Arguments – Jul 23 15](#)

The Board's Use of Schedules

The GNWT-ENR raised a concern in both its comments on the Draft Water Licence and in their closing argument about the Board's inclusion of water use conditions in Schedule 3, Item 1 of the Draft Licence rather than in the body of the Licence. The GNWT-ENR concern was set out on in their closing arguments:

"Further, in its comments on the draft WL, ENR also questioned the increasing use of schedules to detail the requirements of the WL. ENR had specific concern with the inclusion of water use within a schedule to the WL. ENR notes that the water use restrictions are included in the cover page of the WL because of its regulatory prominence. Under the Waters Act and Regulations the use of water is one of the main triggers for a WL. As such, the use of water must be specified within the body of the Licence. In accordance with the legislation, any change to the water use must be approved by the Minister of ENR (i.e. in the case of a Type "A" WL). ENR believes the inclusion of the water use in a schedule to the WL could inadvertently cause regulatory confusion regarding approval of amendments."

With regards to enforceability, the Board notes that Part B, Item 4, of the Licence specifies that the Schedules are part of the Licence and enforceable. The meaning of the term "regulatory prominence" in the GNWT-ENR argument is not clear to the Board but we agree that the use of water in amounts greater than prescribed limits is one of the triggers for a water licence Application. The term "licence" is defined in section 1 of the Act but no form of licence is prescribed in the Act or in the Regulations. It appears to the Board that the form of licence used by Land and Water Boards, as well as Water Boards in other related northern jurisdictions, has been developed over many years of practice rather than being prescribed by law.

The WLWB is aware that a "cover sheet", which in the case of this Type A Licence would be signed by the Minister of ENR signifying approval, is included with a licence when it is issued and that the cover sheet repeats certain provisions of the Licence in summary form. In respect of water use, the cover sheets often specify the maximum volumes of water which may be used on an annual basis. Generally such a provision is also included in the licence itself. In the Draft Licence circulated for comment on June 19, 2015, in relation to "quantity of water" the cover sheet simply referred the reader to Part D, Item 3. That Item then referred the reader to Schedule 3, Item 1. The Board agrees that this approach to drafting the licence may not be as clear and helpful as it should be. It has therefore removed the maximum water use volumes from Schedule 3 as suggested by GNWT-ENR and moved those limits to Part D of the Licence as a condition. The cover sheet has been adjusted accordingly.

In the Board's view, these Reasons for Decision are not the place for a debate about policy options related to the use of schedules in licences. The Board, however, agrees generally with the DDMI responses to ENR comments on the Draft Licence. The federal Minister before, and the Minister of ENR since devolution, have consistently approved licences where administrative and other details related to

the Board's ongoing management of a licence are set out in schedules. These licences and the current one include a specific provision stipulating the WLWB's authority to change schedules without the requirement for a licence amendment. These provisions have also been approved.

It is true that this approach has evolved, but these changes, in the Board's opinion, simply reflect the differences between Water Board and Land and Water Board authorities resulting from land claims, the MVRMA, and consequential changes to legislation such as the Act. In addition, water licences for large mines have become more complex, adaptive management and monitoring requirements are more extensive, and there is a need, as DDMI pointed out in its comments, for flexibility and efficiency in implementing this regulatory regime. Returning to the Minister by way of an amendment for every change to a Type A licence would be cumbersome and costly, and would make it difficult for an operator to run a mine.

The Licensing Process and Updates to the Licence

In their closing argument, DDMI stated that:

"Material changes are proposed in the draft water license that were not previously on the record for this water license renewal proceeding or were only introduced through Board staff questioning and did not provide an opportunity for DDMI or Interveners to question.

We ask the Board to consider if DDMI, and Interveners, were provided fair opportunity to question and consider material changes now proposed by Board staff in the draft water license. If the Board agrees with DDMI that fair opportunity was not provided in all cases, then in these cases the proposed changes should be removed from W2015L2-0001. For example we do not believe that fair process was followed for the new conditions related to management plans proposed in Schedule 6 and the AEMP proposed Part J Item 10²⁷ as discussed further below."²⁸

The Board has been clear throughout the renewal process about its intention to review and update Licence terms and conditions in a way that, where appropriate, improves consistency of the DDMI licence with other major mining licences in the Mackenzie Valley. Before the hearing, in technical sessions and through Information Requests, Board staff and consultants addressed and explored more substantive concerns with the content of the licence. Where questions or concerns remained unresolved, these matters were raised in the hearing as well. This process gave DDMI and other parties the opportunity to respond to or further explain or reinforce their positions in relation to any question raised by the Board.

²⁷ This reference is to Part J Item 9 of the final WL, which is the requirement for an Aquatic Effects Re-Evaluation Report.

²⁸ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Closing Arguments – Jul 23 15](#) page 5.

Most of the changes proposed in the Licence involve simple reorganization with minimal change to Licence content. Some rationalization of conditions to reflect the changes in the operation of the project has taken place and minor wording changes were made to enhance clarity and enforceability. Further, the specific wording of all proposed changes was set out in a Draft Licence which was circulated for comment to all parties, before final arguments were due.

DDMI and other parties made numerous comments on this Draft Licence. The comments were all reviewed by the Board and staff. The Board's decision on the Licence was made in consideration of the whole record, including comments on the Draft Licence and final arguments. It should also be noted that the arrangements for receiving comments on the Draft Licence set out by the Board allowed DDMI not only to raise its own concerns, but to comment on all the concerns raised by other parties as well. Finally, DDMI received the arguments of all other parties and had the opportunity to respond to them, as well as to make its own submission.

The passage quoted above is from the DDMI final argument. With the exception of its concern about management plans and the condition in Part J Item 10 which are responded to fully below in these reasons, DDMI provides no detail about what it argues are "material changes" in the Licence. As a result it is not possible for the Board to respond specifically to this concern. DDMI did not include these concerns or any list of "material changes" to which it objected in its hearing presentation or submissions in argument.

Board staff do not present evidence or argument in our proceedings. They questioned DDMI thoroughly in the hearing. The Draft Licence is then prepared based on the full record, not just DDMI's evidence. DDMI's views and argument have been considered. The Board notes that a number of the changes in the final Licence are a direct result of the DDMI comments on the draft, hearing submissions and final argument.

The Board is subject to legislated timelines and does not have unlimited opportunities to adjust its process to address every concern raised by every party. Ultimately, subject to the requirements of fairness, it is the Board's responsibility to determine materiality. Having reviewed the process in some detail, it is the Board's view that DDMI had a fair opportunity to put its concerns forward in the hearing, through comments on the Draft Licence and in final argument. Those concerns have been given careful consideration by the Board. A number of them are addressed further in the Reasons below.

To close on the subject of timelines for exchanges on the Draft Licence, evidence, and argument, the Board notes that the legislated timelines for Type A water licence proceedings are set out in section 47 of the *Waters Act*, which specifies that "*the Board shall make a decision within a period of nine months after the day on which the application is made*" and the Minister's decision required for a Type A Licence shall be made within 90 days following the Board's decision.

These timelines in the legislation came into force on March 25, 2014. The WLWB recommends that all Type A water licence renewal applications be submitted 12 months prior to the expiry date of the Licence. This recommendation was communicated to DDMI.²⁹ DDMI's Water Licence W2007L2-0003 expiry date is October 31, 2015, and DDMI submitted their Application on January 16, 2015, resulting in tight timelines and little flexibility for the various stages required of the proceeding. Nonetheless, it is the Board's view that DDMI has been given full opportunity to address the proposed changes in the Licence.

4.0 Determinations Pertaining to Water Licence W2015L2-0001

4.1 Requirements of Section 26 and 27 of the *Waters Act*

Existing Licensees

After reviewing the submissions filed on the Public Registry and made at the public hearing, the Board is satisfied that, with respect to paragraph 26(5)(a) of the *Waters Act*, the granting of this Licence to DDMI will not adversely affect, in a significant way, any existing Licensee, provided the conditions of the Licence are adhered to. There are no other applicants with precedence.

Existing Water Users

Paragraph 26(5)(b) of the *Waters Act* prohibits the issuance of a Licence unless the Board is satisfied that appropriate compensation has been or will be paid by the Applicant to people who were, at the time when the Applicant filed its Application with the Board, members of the classes of water users, depositors, owners, occupiers, or holders listed under paragraph 26(5)(b), who would be adversely affected by the use of waters, or deposit of Waste proposed by the Applicant.

The Board received no claims for compensation either during the prescribed period or afterwards. Provided that compliance with the Water Licence conditions is achieved, the Board does not believe that any users or persons listed in paragraph 26(5)(b) of the *Waters Act* will be adversely affected by the use of Waters or the deposit of Waste proposed by the Applicant.

Water Quality Standards

Insofar as subparagraph 26(5)(c)(i) of the *Waters Act* is concerned, the Board is of the view that compliance with the Licence conditions will ensure that Waste produced by the operation of the Diavik mine will be treated and deposited in a manner that will maintain water quality consistent with applicable standards and the Board's *Water and Effluent Quality Management Policy*. Refer to section 4.3 below for more information.

²⁹ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Legislated Timelines – Communication from WLWB Staff – Sept 18 14](#)

Effluent Quality Standards

Consistent with subparagraph 26(5)(c)(ii) of the *Waters Act*, the Board is satisfied that the effluent standards it has set out in the Licence as conditions are consistent with the Board's *Water and Effluent Quality Management Policy* and will protect the receiving waters and environment. These are further discussed below under Part H: Conditions Applying to Water and Waste Management.

Financial Responsibility of the Applicant

The Board must satisfy itself of the financial responsibility of the Licensee under paragraph 26(5)(d) of the *Waters Act* before it can renew the Licence. The Board is satisfied that DDMI is capable of meeting the obligations set out in the *Act* and the Licence. DDMI has provided and maintained the securities required by both Licences (W2007L2-0003 and N7L2-1645). There is no evidence before the Board indicating that the renewal of the Licence will affect security requirements. The Board concludes that security currently held by the Minister is sufficient and that paragraph 26(5)(d) has been satisfied.

Requirements of Subsection 27(2) of the Waters Act

It is the opinion of the Board that compliance with the conditions of the Licence will ensure that any potential adverse impacts on other water users, which might arise as a result of the issuance of the Licence, will be minimized.

4.2 Requirements of Subsection 61 of the MVRMA

Pursuant to subsection 61(2) of the MVRMA, the Board may not issue a Licence except in accordance with any applicable land use plan. The Tł̨ch̨ Land Use Plan is not applicable to the lands included in the scope of Licence W2015L2-0001 and there is no other applicable land use plan; therefore, the Board is satisfied that the requirements of this subsection have been met.

4.3 Water Licence W2015L2-0001 Terms and Conditions

In their Application, DDMI explicitly stated that they had not identified any licence conditions that were obsolete, out-of-date, or that should be added.

Water Licence Term

The Board set a Licence term of eight years, which corresponds with the planned end of commercial operations (2023). DDMI requested a term of fifteen (15) years, and ENR supported such a term. Environment Canada (EC) acknowledged that DDMI's proposed term was within statutory limits, but did not recommend a specific term. The other parties recommended shorter terms:

- LKDFN recommended a term similar to previous terms for the Diavik mine (these were 7 and 8 years, respectively).
- The North Slave Metis Alliance (NSMA) recommended a Licence term of five years.

- The Environmental Monitoring Advisory Board (EMAB) recommended that the “term for this license should expire no later than the last year of operations prior to beginning closure of the entire mine.”³⁰

An eight year Licence term will enable DDMI to end commercial operations, complete closure planning, and submit a water licence renewal application that is informed by an approved final closure and reclamation plan. This term is consistent with the previous two Licences for the Diavik mine. The Board was not convinced by DDMI’s assertion that a shorter term is detrimental to the company, and found merit in a number of the arguments for a shorter term. Also, the Board concluded that there is insufficient evidence to draft a Licence covering the closure and post-closure period and that the amendment processes proposed by the GNWT-ENR and DDMI are inferior to a renewal process. The Board explains these reasons in more detail below.

The GNWT-ENR did not provide any reasons to explain why it supports a fifteen year term; it only provided advice on how a longer term could be achieved. DDMI on the other hand, presented a number of reasons in support of a longer term. First, DDMI advances a concern that parties in the ICRP process will not actively participate in the closure planning process if the licence term does not include closure because they will wait until a closure “renewal” licence is required to get involved. DDMI is concerned that at that point the “parties would argue in favour of complete re-evaluation of the approved closure designs, monitoring programs ...”³¹ It is difficult to give weight to such an argument. The Board sees little value in speculation about what parties might or might not do in future proceedings as a basis for a decision about licence term in this one.

In any event, the WLWB is confident that regulators and in particular GNWT-ENR will participate in closure planning in a manner consistent with their mandates. Should additional information or the attendance of government experts be required, the Board has the authority under sections 22 and 25 of the MVRMA to compel production. We note as well that EMAB exists solely to contribute to management and planning processes related to the Diavik Mine and could be expected to participate. First Nation and Metis may participate based on their concerns and capacity when opportunities for involvement arise, and have participated substantially in past public review processes for DDMI’s ICRP.³²

DDMI also maintained that a fifteen year Licence term would “allow a coordinated, efficient planning and execution of closure”. LKDFN challenged this assertion at the public hearing, and asked DDMI how a seven or eight year term would inhibit DDMI’s planning efforts. DDMI responded that a shorter term would introduce uncertainty, a “pause” during another renewal proceeding, and lack of clarity over what DDMI may be authorized to do and when. When asked by LKDFN for specific examples of obstacles

³⁰ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – EMAB Closing Arguments – Jul 16 15](#).

³¹ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Closing Arguments – Jul 23 15](#), page 1.

³² For example, there were almost 400 comments submitted collectively by eight parties on Version 3.1 of the ICRP.

that would impede DDMI's planning efforts, DDMI did not provide any.³³ The NSMA also disagreed with DDMI that a shorter term would impede closure planning efforts.³⁴ The Board agrees that a licence term ending prior to closure should not prevent DDMI from continuing with its closure planning, as outlined in its approved ICRP.

Even if the Board wished to set a fifteen year Licence term, Interveners³⁵ agreed that there is insufficient evidence to draft appropriate conditions for regulating the closure and post-closure periods. For example, there is not enough evidence to develop post-closure EQC (as acknowledged by DDMI³⁶), determine compliance points, and establish regulated mixing zones or even determine if mixing zones are appropriate. Similarly, the absence of an approved final closure plan makes it difficult to identify key requirements that should be regulated through Licence conditions. Also, it is not clear what conditions, if any, are necessary to support a liability relinquishment process since no mining company in the Mackenzie Valley has gone through this process from start to finish. It is the Board's understanding that the GNWT is developing, but has not finalized, policy around security and relinquishment. The resulting uncertainty further diminishes the Board's ability to develop closure-related conditions that would adequately address relinquishment.

The Board cannot rely on existing licences that regulate a mining company during the transition from operational to closure years. As noted by GNWT-ENR, there are none in the NT.³⁷ Existing water licences (e.g., for the Tundra and Colomac mines) regulating closure of a mine are generally for abandoned or orphaned sites under the care and control of government, and therefore are not a suitable reference.

To resolve this problem, and accommodate their recommendations for a fifteen year term, DDMI and GNWT-ENR proposed different means. DDMI proposed that the Board could add new conditions progressively through amendment requests as needed.³⁸ GNWT-ENR proposed that a blended or two-part Licence could be drafted. Both of these approaches would also require a series of future amendments. Neither of these proposals is supported by an adequate foundation in evidence in this proceeding.

It is not clear why GNWT-ENR and DDMI believe that a series of amendments is preferable to a licence renewal. DDMI appears to be concerned that other parties could expand the scope of a renewal proceeding, and "would completely re-evaluate all of the approved closure designs, monitoring

³³ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing - Transcript – May 28 15](#), pages 39-42.

³⁴ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – NSMA Closing Arguments – Jul 16 15](#), page 2.

³⁵ [EMAB Closing Argument](#), page 3; [NSMA Closing Argument](#), page 2; [Public Hearing Transcript](#), page 162, lines 1-6 (GNWT-ENR).

³⁶ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing - Transcript – May 28 15](#), page 75, line 19.

³⁷ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – GNWT-ENR Intervention – May 7 15](#), page 4.

³⁸ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Closing Arguments – Jul 23 15](#), page 1.

programs and closure criteria and recommend new license conditions for execution of the closure plan”.³⁹ Section 36 of the *Act* makes it clear that renewal and amendments to licences can only take place on application of the licensee or on the initiative of the Board, when a renewal or amendment appears to be in the public interest. A review of Board practice indicates that such Board initiated proceedings are rare. In any event, the scope of any WLWB proceeding is a matter for Board discretion. In the absence of convincing evidence of a problem, the Board has no obligation to expand the scope of a proceeding simply because parties other than the licensee may wish to revisit matters which have already been determined. Generally the scope of a proceeding is driven by the licensee’s application either to renew or amend a licence. It is also possible to either amend the term or selected conditions of a licence without the need for a review of all its conditions and attendant plans.

The Board also concluded that a series of amendments would not necessarily offer any efficiencies or reduce the burden on the parties. The changes to the Licence necessary to properly regulate mine closure will affect a variety of matters related to the flow or quality of water including EQCs. In addition, the conditions for closure of a major mine on a water body as pristine as Lac De Gras will likely attract interest from regulators, first nations, Metis, Inuit and the public. All these factors contribute to the likelihood that amendments to the Licence to provide for closure conditions could merit if not require a public hearing.⁴⁰ Thus an approach focussed on amendments to the Licence instead of a renewal may not avoid a hearing. In fact, there may be efficiencies resulting from having a single Licence renewal hearing rather than a series of sequential amendments involving a number of public hearings. Consequently, the Board sees little merit in DDMI and GNWT-ENR’s proposed approaches.

In addition the Board agrees with the LKDFN that a single renewal process prior to closure offers particular benefits:

“LKDFN values opportunities, such as this one, where concerns from the community of Lutsel K’e can be voiced within the official regulatory process. LKDFN believes that the previous terms of the water license have been appropriate and requests that a similar term be implemented for this renewal. LKDFN would appreciate at least one more opportunity to review water quality parameters and the proponent’s performance before mine operations finish.”⁴¹

“...the formal renewal process, especially the public hearing, presents a clear checkpoint in the regulatory process that allows for a coordinated analysis by concerned parties.”⁴²

³⁹ Ibid, page 1.

⁴⁰ See subsection 41(2) of the Act.

⁴¹ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – LKDFN Intervention – May 7 15](#).

⁴² See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – LKDFN Closing Arguments – Jul 15 15](#).

The NSMA expressed a similar view.⁴³ While the Board has an increasingly robust system of ongoing Licence evaluation,⁴⁴ and the Licence can be amended on the Board's motion should the need arise, the renewal process can offer a more inclusive and systematic evaluation of the effectiveness of Licence conditions. Such a process also provides an opportunity to adjust the Licence to reflect new information (e.g., from reclamation research, engagement, operational experience, etc.), unforeseen problems (e.g., related to performance of an Engineered Structures), and improvements in the Board's practices for regulating mines. The Board also took into account NSMA's statement in their Intervention that "the term of the license encompasses developments of A21 and possibly Dominion Diamond Ekati Corporation's Jay Pit. There can be many unforeseen cumulative impacts that can result from the concurrent developments of the neighboring large open pit mines in the contiguous waters".

Concurrent Licences and Closure Planning

In its closing argument,⁴⁵ DDMI stated that if the Board selects a Licence term less than 15 years, the company would like the opportunity to apply for a separate closure licence, concurrent with W2015L2-0001, instead of a renewal. DDMI outlines an iterative process that begins with an application for a licence to regulate its first closure efforts, and continues with amendments to the closure licence as DDMI continues to close parts of the mine.

While it appears that DDMI has put some thought into how this arrangement might work, it is not clear to the Board that concurrent Type A licences for the same project can be supported by the legislation and regulations. This suggestion is without precedent in any of the territories even for mines which have been closed subject to water licences such as the Polaris Mine in Nunavut. Additional discussion would be needed to identify the benefits or unforeseen problems with this approach. It is possible for instance that Licence conditions which apply to both closure and operations (for example, conditions related to the water management system, the receiving environment, etc.) may not be easily separable into two licences without creating conflict or uncertainty.

The Board is not making a decision on the feasibility of this proposal. There is simply not enough evidence before the Board to make a conclusive determination at this time. If DDMI wishes to pursue this concept it should take the initiative to present more supporting evidence and enter into a dialogue with the Board and parties. In any event, this is not a matter which affects the content of the Licence at this time.

⁴³ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – NSMA Closing Arguments – Jul 16 15](#), page 3.

⁴⁴ Examples include annual reporting related to compliance, action levels for the AEMP, requirements for ongoing engagement, annual closure planning progress reports, and more.

⁴⁵ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Closing Arguments – Jul 23 15](#), pages 3 and 4.

Part A: Scope and Definitions

Scope

The scope of the Licence authorizes the Licensee to conduct the activities identified in the Application. Minor revisions were made to the scope to be more consistent with other WLWB Licences. No party indicated any concerns with the revised language circulated in the Draft Licence.

Definitions

The Board has defined a number of terms used in the Licence in order to ensure a common understanding of Licence conditions and avoid future differences in interpretation. Some of the definitions from Licence W2007L2-0003 have been revised and new definitions added. For the most part, the definitions use wording similar to that found in other water licences issued by the Board, and with Guidelines and Policies developed since the Licence was last renewed. Where necessary, the Board created new definitions or changed standard wording, as described below:

- Definitions of Action Level, Closure and Reclamation Plan, Closure Criteria, Closure Objective, Engagement Plan, Modification, Progressive Reclamation, Reclamation, Response Framework, Response Plan, Seepage, and Unauthorized Discharge have been added to support new conditions, reflect Board policies and guidelines, and to be consistent with other current WLWB Water Licences.
- Mount Polley Report: this definition has been added to the Licence and does not appear in any other Water Licences. The topic is discussed in detail in Part H of the Reasons for Decision.
- Receiving Environment: Water Licence W2007L2-0003 did not include a definition of Receiving Environment, although the term was used in several places in that Licence. In the Draft Licence, the following definition was added, based on the definitions from the Water Licences for the Ekati and NICO mines:

"Receiving Environment" means, for the purpose of this Licence, the natural environment that receives any deposit or Discharge of Waste, including Seepage and runoff, from the Project.

DDMI commented that the definition is not specific enough, and asked "By this definition what is not part of the Receiving Environment? Are areas within Waste Facilities included?" The main purpose of the word "natural" in this definition is to exclude the Licensee's Waste management facilities (e.g., the PKC Facility, the Waste Rock Storage Area, landfarms, etc.). The Board recognizes that the term "natural" is not defined in the Licence, but is of the view that by any reasonable interpretation of this word, the Waste facilities at the mine site are not part of the natural environment, and therefore are not part of the Receiving Environment. The definition of Receiving Environment is discussed again below, as it relates to Part F, Item 1.

Part B: General Conditions and Schedule 1

The General Conditions section includes an assortment of conditions that support the other Parts of the Licence. This includes conditions which pertain to the Surveillance Network Program (SNP), measuring devices, signage, water use fees, annual reporting, the Engagement Plan, and the location of copies of this Water Licence. These are standard conditions found in other water licences issued by the Board and in the previous DDMI Licence.

Several changes were made in Part B of W2015L2-0001. Part B, Item 6, added reference to the MVLWB's *Water Use Fee Policy*, which was developed since the Board issued Licence W2007L2-0003. The requirements of the Annual Water Licence Report were moved from Part B to Schedule 1.

Part B, Item 13, includes new requirements regarding an Engagement Plan in accordance with the Boards' *Engagement and Consultation Policy* which came into effect in 2013. An Engagement Plan was not a requirement of W2007L2-0003, however, DDMI submitted an Engagement Plan on November 12, 2014,⁴⁶ and it was approved by the Board on January 26, 2015.⁴⁷ The new condition of W2015L2-0001 requires that DDMI operate in accordance with the Plan and submit updates for approval.

Part B, Items 4, 10, 11, and 12, are general conditions found in other water licences and were added to clarify requirements. No parties provided comments on the addition of these conditions during the review of the Draft Licence.

Part C: Conditions Applying to Security Deposits and Schedule 2

This section of the Licence establishes the amount of security to be posted and maintained by the Licensee by reference to Schedule 2 of the Licence, and sets out requirements related to updating security. The purpose of these conditions is to implement the direction provided in *AANDC's Mine Site Reclamation Policy for the Northwest Territories*, chiefly, that "adequate security should be provided to ensure the cost of reclamation, including shutdown, closure and post-closure, is born by the operator of the mine rather than the Crown".⁴⁸ The Board is authorized to set the security deposit amount by subsection 35(1) of the *Waters Act* and the regulations⁴⁹ promulgated under that *Act*.

The security deposit was addressed in Part C, Item 1, and Schedule 2 of Water Licence W2007L2-0003. The Board revised the conditions and added new conditions to improve clarity, based on recent licences;

⁴⁶ See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 – Diavik – Engagement Plan – Nov 12 14](#)

⁴⁷ See WLWB Online Registry for [W2007L2-0003 – Diavik – Engagement Plan – Directive and Reasons for Decision – Jan 30 15](#)

⁴⁸ AANDC's duties regarding security for projects on non-federal lands has been passed to the GNWT. The AANDC Policy has been a fundamental underpinning to the Board's security-related decisions in the past, and in the absence of official direction from the GNWT on how the Policy applies under devolution, the Board has continued to rely on this Policy for decision-making related to this Water Licence.

⁴⁹ Subsection 11(1) of the *Waters Regulations*.

the changes are generally administrative. As in other licences, the conditions allow the Board to request a security update from the Licensee at any time, and to adjust the security amount at any time, based on available information. Specifically, Part C Items 3 and 4 stipulate that the Board can revise the security deposit and that the Licensee will post the new deposit within 90 days. These two conditions pertain to both increases and reductions in security. In its comments on the draft Licence, the GNWT stated:

“ENR notes that the WLWB has included the requirement to post within 90 days. ENR notes that this requirement has been written into several other recent Water Licences. ENR has provided its opinion on the matter in previous correspondence with the WLWB and recently the MVLWB. To be clear, the Minister also supports the timely posting of security. ENR will provide further comment as part of its closing arguments for the renewal licence.”

DDMI responded as follows:

“If the GNWT has a specific comment regarding this condition they should be providing the full reference to where DDMI and other parties can find the “provided opinion”. GNWT should not be permitted to wait and provide this evidence as part of closing arguments. The purpose of this review process is to enable all parties to review and respond. Alternatively, if this is an “internal” issue between the GNWT and the LWBs it would be more appropriately resolved outside this renewal process and any resolution communicated through policy or guidance. DDMI has no objections to the inclusion of the 90 day limit and understands that, like other dates in the Water License, extensions can be granted by the Board where justified.”

The Board has already outlined its position on the requirement to post revised security amounts within 90 day in its October 30, 2014 Reasons for Decision pertaining to an amendment of the Ekati Mine Water Licence (W2012L2-0001).⁵⁰ The condition is drafted so as to be binding on the Licensee, not the Minister and DDMI has indicated no problem with the condition. The Board is not persuaded that the condition should be removed.

The Board has made no change to the amount of the security deposit required under Water Licence W2007L2-0003; the deposit specified in Schedule 2 of the renewed Licence remains at \$118,460,000.⁵¹ Within the Water Licence Renewal Questionnaire that the Board provided to DDMI (September 17, 2014), the Board stated that the company did not have to submit an updated security estimate with its Application. This was because the Board was expecting DDMI to submit an updated estimate with its 2014 Interim Closure and Reclamation Plan Progress Report on October 31, 2014, which DDMI did. The

⁵⁰ See WLWB (www.wlwb.ca) Online Registry for [W2012L2-0001 – Ekati – Water Licence – Amendment for Lynx Project – Reasons for Decision – Oct 30 14](#)

⁵¹ This is calculated as the total RECLAIM estimate of \$129,550,000 minus \$11,090,000 held under the land lease.

Board reviewed the estimate and set the security deposit at \$118,460,000 to reflect the additional costs associated with the initial construction stages of the A21 pit. A detailed explanation of how the Board arrived at this amount can be found in the Reasons for Decision for the Board's March 13, 2015 meeting.⁵²

EMAB and DDMI provided input on the security deposit; however, their comments did not result in an adjustment to the deposit, as explained below:

- DDMI noted in its Water Licence application that the Department of Fisheries and Oceans holds security under the Fisheries Authorization. DDMI indicated that the company is “aware that there is likely security duplication with the Water License security and is hopeful that the final LWB security estimating guidance will provide clarity on how this potential duplication can be addressed.”⁵³ DDMI did not request a reduction to their security deposit, or provide any evidence to support a reduction to their security deposit.
- EMAB suggested that the following costs be added to the closure cost estimate:
 - *Research and engineering costs in support of proposed reclamation activities.*⁵⁴ While it may be reasonable to include reclamation research costs in the security deposit, the Board has not previously required this of DDMI or any other proponents, and a recent estimate of these costs is not available. The Board may wish to pursue this matter further in the future, for example by asking the GNWT whether it expects to implement research plans if a mine is abandoned.
 - *Regulatory and “consultation” costs to obtain necessary permitting and authorization.*⁵⁵ This cost is already included in the RECLAIM estimate.⁵⁶
 - *“Any additional project management costs should GNWT be required to undertake the remediation”.*⁵⁷ EMAB later acknowledged that these costs are already included in the Board's RECLAIM estimate.⁵⁸
 - *Construction of fish nursery and feeding habitat within the diked area of each pit.*⁵⁹ It is not clear whether this cost should be included in the security estimate. DDMI indicated at the

⁵² See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 – Diavik – Security Review – A21 – Reasons for Decision – Apr 9 15](#)

⁵³ DDMI response to WLWB Comment #6 on Licence Renewal Application (Online Review System, Item for Review posted January 30, 2015)

⁵⁴ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – EMAB Intervention – May 7 15](#), page 10.

⁵⁵ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – EMAB Intervention – May 7 15](#), page 10. It is assumed EMAB is referring to engagement as defined in the Board's Engagement Guidelines, namely as activities conducted by the proponent.

⁵⁶ See the “Post-Closure” tab of the Board's April 2015 RECLAIM estimate. See also WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 – Diavik – Security – WLWB Response to Diavik Letter – Dec 3 14](#), page 1.

⁵⁷ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – EMAB Intervention – May 7 15](#), page 10.

⁵⁸ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – Transcript – May 28 15](#), page 111, lines 9-11.

public hearing that this cost is covered in the Fisheries Authorization. Also, the Board lacked sufficient evidence to determine what the cost would be. DDMI regularly submits updated security estimates for the Board's consideration, the Board may wish to address this issue in the future.

Part D: Conditions Applying to Water Use and Schedule 3

The conditions in Part D of the Licence address the sources and maximum amounts of freshwater that can be used for the Project, and stipulate other restrictions related to water withdrawals.

As discussed above, the water quantities listed in Part D, Item 3, had been moved to a Schedule in the Draft Water Licence, however, this condition was retained in Part D of W2015L2-0001 as per GNWT-ENR's recommendation.

Part D, Item 4, of W2007L2-0003 required that "all water intakes in fish-bearing waters shall be equipped with a screen with a mesh size sufficient to ensure that no entrainment of fish can occur". In order to reflect current WLWB Licences (e.g., Ekati and NICO), the condition was revised to require that the Licensee "shall construct and maintain the water intake(s) with a fish screen designed to prevent impingement and entrainment of fish. The fish screen shall be in accordance with the detailed guidance referred to in Schedule 3, Item 1". The Schedule requires that the Licensee "shall adhere to the best practices outlined in both the Department of Fisheries and Oceans' Freshwater Intake End-of-Pipe Fish Screen Guidelines, 1995, and Fish Screen Design Criteria for Flood and Water Truck Pumps, 2011." In their comments on the Draft Licence, DDMI noted that this condition "may not be consistent with the existing approved Diavik water intake structures and/or approvals previously received from the Department of Fisheries and Oceans. The additional new conditions have not been provided, with supporting rationale, as part of the renewal process and have not been subject to review, questioning or consideration of additional evidence." DDMI did not provide any evidence or argument such as which structures would not conform to the Guidelines and what the implications would be to DDMI. The Board further notes that the water intake at Diavik includes a screen, developed according to DFO specifications, to prevent the entrainment and/or impingement of fish.⁶⁰ The Board has therefore added this condition to the Licence in order to meet the intent of the original condition.

Part E: Conditions Applying to Dewatering and Schedule 4

The conditions in Part E of the Licence address the sources and requirements for dewatering. Item 1 of W2007L2-0003 specified that a portion of Lac de Gras could be dewatered to facilitate mining, drawdown of the North Inlet was authorized to increase storage capacity in that water body, and

⁵⁹ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – EMAB Intervention – May 7 15](#), page 9.

⁶⁰ See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 – Diavik – Water Licence Inspection Report – June 2013 – June 27 13](#)

discharge of water from hydrostatic testing was permitted. These two latter authorizations were removed from this section of W2015L2-0001 as they are not relevant to dewatering. No party indicated any concerns with the revised language circulated in the Draft Licence. The waste streams are no longer explicitly mentioned in the Licence, because, as described in Part H below, the Board will address the issue of which Discharges are authorized via the Water Management Plan.

In order to align with current DDMI naming practices, the requirement for Dewatering Management Plans in Items 2 and 3 of W2007L2-0003 have been moved to Part F (Construction) of the Licence and included in the Construction Environmental Management Plan. The specific requirements for the plans have been moved to Schedule 5 (Construction).

Part E Item 5 has been revised to include “if any erosion is observed, the Licensee shall immediately notify an Inspector and take the necessary corrective action to mitigate the erosion problem to the satisfaction of an Inspector”. In their comments on the Draft Licence, DDMI noted that “it is not practical that ‘any’ erosion trigger notification and correction”. They also note, in their recommendations on the Draft Licence, that “there should be a threshold for erosion rather than ‘any’ erosion”. DDMI refer to the wording of Engineering Standards in Part H of the Licence. Part H, Item 20(f), (which remains unchanged from W2007L2-0003), specifies that “any deterioration or erosion of any Engineered Structures associated with the Water Retention Dikes shall be reported to an Inspector and repaired immediately”. The new requirement for notification to Part E, Item 5, is in the Board’s view, consistent with the requirements in Part H, Item 20(f).

DDMI did not suggest any change to or removal of the notification requirement from the Engineering Standard in Part H, Item 20(f). The addition in Part E Item 5 requires notification of the Inspector when any erosion is observed. The Board notes that “...the necessary corrective action...” is a matter for DDMI discretion and that action may not be required in some situations. Thus we conclude that Part E Item 5 does not impose an unreasonable burden on the Licensee. The Board believes the Inspector will determine appropriate corrective action as required. This change in the Licence is also consistent with other Licences issued by the WLWB.

Part F: Conditions Applying to Construction and Schedule 5

Part F of the Licence addresses several matters related to Construction, including: designs, maintenance, record-keeping, as-built drawings, notifications, and more. Schedule 5 sets out the required contents of the submissions referred to in Part F. The main purpose of this Part is to ensure that Engineered Structures are built to appropriate standards with proper oversight, in order to facilitate good performance, avoid failures, and ultimately, to protect the Receiving Environment.

For the most part, the revisions to conditions in this Part are administrative improvements that are consistent with other recent licences issued by the Board or updates to reflect Board decisions made during administration of Licence W2007L2-0003. For example the Dredging Management Plan has been

combined with the Dewatering Plan, and renamed as the A21 Construction Environmental Management Plan. A number of changes were also made to reflect that only the A21 pit has yet to be developed and that the other two pits no longer undergo open pit mining.

Part F Item 1 of the Draft Licence read as follows:

“The Licensee shall ensure that all structures intended to contain, withhold, divert, or retain water or Waste are designed, constructed, and maintained to prevent escape of Waste to the Receiving Environment.”

GNWT-ENR commented that in its view this condition should either reference surface and ground waters, or else the definition of Receiving Environment should be amended. Item 1 was written to address the release of Waste as that term is defined in the Act and in relation to the prohibition found in section 11 of the statute. Together these provisions provide for broad protection of the aquatic environment. In answer to the GNWT-ENR concern, the regulatory scheme not only addresses Waste released into surface or ground water, it also addresses Waste released into an area such as that described in paragraph 11(1)(b) of the Act, namely: “another place under conditions in which the waste, or other waste that results from the deposit of that waste, may enter waters in a water management area”. Consequently, the Board sees no reason to amend Part F, Item 1 as suggested.

DDMI’s comments on the definition of “Receiving Environment” are addressed in the Definitions section of this document.

The only significant Construction-related matter that arose during this proceeding relates to water accumulation against the PKC dams. Water accumulation has the potential to reduce dam stability and/or produce Seepage. The discussion focused on Part C, Condition 5 of Water Licence W2007L2-0003, which stipulates that:

“There shall be no accumulation of water against the containment dam structures of the Processed Kimberlite Containment Facility until such time as the results of the thermal monitoring program have demonstrated the integrity of the frozen base of the dams.”

The condition also appeared in the original Licence (N7L2-1645). Neither licence included a requirement to report the results of the thermal monitoring program. The Board was unable to identify any documentation on the public registry for either Licence that demonstrates the integrity of the frozen base of the dams. The absence of a requirement to report thermal monitoring results or to inform the Board that DDMI plans to begin allowing water accumulation against the dams makes it difficult to track compliance with or enforce this condition.

In order to resolve this matter, during the public hearing Board staff asked whether the company could provide results of the thermal monitoring program. DDMI replied that the information is in the annual

inspection reports; however, the Board was unable to identify results that demonstrate the integrity of the frozen base of the dams. For example, the most recent inspection report indicates that the base of the east and west dam foundations are frozen, but is equivocal about the north and south dams.⁶¹

At the public hearing, Board staff also asked DDMI whether water was accumulating against the dams, and DDMI responded:

“It's been a long time since we've had any water actually against the dam. It was -- it was only during the original -- until you built -- developed the beaches, the PKC beaches, that was the time of concern, but that was many years ago. We ended that. And we've got full beaching against all of the dams.”

Staff then asked whether, in DDMI's view, it would be “reasonable to revise Part C, Item 5 to say that there shall be no accumulation of water against the containment dam structures of the processed kimberlite containment facility, period?”⁶² DDMI indicated that an engineer should answer the question, and since none was at the public hearing, DDMI agreed to submit the answer as an undertaking.

In Undertaking #1 DDMI stated:

“The current text is from the original N7L2-1645 Water License and was directed towards the period of initial dam construction when it was necessary to allow time for the dam foundation to freeze back. The original text is no longer necessary but we understood it to be Board practice to retain these. The proposed text would be a new restriction on the PKC operations that has not been substantiated technically. DDMI acknowledges that our operating practices are to keep the PKC pond small, centralized and away from the dams. However, we do not support the proposed text as it could unnecessarily restrict facility operations.”

The Undertaking response did not include any information indicating whether the thermal monitoring results had demonstrated dam integrity, or any documentation that the WLWB or the MVLWB (the original administrator of N7L2-1645) had determined this condition to be obsolete or inactive in some way. DDMI also did not provide any evidence in the Undertaking to show why “the original text is no longer necessary”, nor how their operations would be restricted and what the impacts of these restrictions might be on the company.

In the Draft Licence, the condition was changed to eliminate the need for the thermal monitoring results:

⁶¹ See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 - Diavik - 2014 Annual Dam Safety Inspections – Dec 10 14](#), October 2014, pages 20-22.

⁶² See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing - Transcript – May 28 15](#), page 66, lines 18 to 24.

There shall be no accumulation of water against the containment dam structures of the Processed Kimberlite Containment Facility, unless approved by the Board.

This condition is more flexible than the original condition, in that it opens the possibility for some accumulation of water against the dams even if thermal monitoring results don't demonstrate the integrity of the frozen bases. Under this condition, DDMI may present other types of evidence that some water accumulation against the dams may be appropriate under certain circumstances.

In its comments on the Draft Licence, DDMI responded that "the technical basis for this condition has not been provided". The company submitted a memo from Golder Associates which stated that:

"the current Phase 6 PKC Facility design criteria allow for periodic ponding of water against the PKC Facility dams. Controlled periodic ponding of water against the PKC Facility dams does not pose a risk to the PKC Facility dams based on the following..."

Golder then listed a number of points to support this statement. While the Board does not find Golder's statements to be incorrect, and recognizes that as the engineer of record for the PKC dams, Golder is far more familiar with the technical aspects of the PKC dams, the Board must ensure that the Licence conditions reflect the evidence on the record and that due process is followed. The Board was unable to locate the design criteria described by Golder within any documents on the public registry. Also, the matter is confounded by DDMI's response at the Public Hearing (noted above) and conflicting evidence in various documents on the registry. For example, DDMI's approved PKC Operations Plan (Version 2.1, October 2012) lists the following as one of six water management objectives (page 12):

"Avoid water ponding against the dams: Any water ponding against the dams could degrade the permafrost foundation and could enhance seepage potential through the dam and the foundations."

Also, DDMI's PKC Dam Safety Review (submitted in response to IR#4) referred to the problems DDMI encountered in 2008 and 2009 with seepage associated with defects in the North PKC dam (these defects were later rectified). The review engineer stated that (page 29 of the DSR): "The high seepages, and the potential for internal erosion, clearly demonstrated that a significant water pond in direct contact with the North Dam must be avoided." These examples suggest that the condition regarding water accumulation should not be entirely removed.

While the information provided by Golder is considerably more robust than that provided within DDMI's Undertaking, DDMI did not present the Golder memo as part of its Undertaking, and there was therefore less opportunity for public input and for the Board to consider how Golder's memo might inform a revision to the Licence condition.

DDMI did not propose an alternative condition, and it is unclear whether DDMI objects to the condition as it originally appeared in the previous Licences. Assuming Golder's statements are true, it appears that DDMI may have been out of compliance with Part C Condition 5 of Water Licence W2007L2-0003. However, in its renewal Application, DDMI did not identify any concerns with the condition and made no recommendations to have it changed or removed.

Given the uncertainties surrounding this subject, the Board concludes that the condition in the Draft Licence is appropriate. The revised condition preserves the intent of the original condition, increases flexibility for DDMI, and allows for a public review and approval process to determine whether water accumulation should be permitted. The Board also anticipates that the new condition will provide more clarity for the Inspector.

Following issuance of this Licence, it is unclear whether DDMI will be out of compliance with this condition. The Board acknowledges this possibility, but if this is the case, DDMI has likely been out of compliance with W2007L2-0003 for some time. The Board recognizes that this is an undesirable situation, but in light of the reasons explained above, the Board maintains that the revised condition is necessary. If DDMI seeks Board approval for water to accumulate against the PKC dams, DDMI should submit a request to have this practice approved by the Board. The request should be accompanied by a complete rationale, evidence that there are no stability or environmental issues associated with this practice, and supporting documentation.

Part G: Conditions Applying to Modifications

Part G of the Licence contains conditions outlining when and how Modifications to Engineered Structures may be authorized. The conditions also ensure that the Board and the Inspector are kept informed and have the opportunity to request more information or reject the proposed Modification. This section is closely linked to the Construction section (Part F), which houses conditions related to the design and construction of Engineered Structures. Part G relies on the definition of Modification, which does not include expansions, nor alterations to the purpose or function of a structure. The conditions in this section are consistent with other Licences issued by the Board.

The purpose of Part G is to streamline the process for authorizing Modifications and ensure that any proposed changes that might be inconsistent with the scope or conditions of the Licence are brought to the Board's attention.

Minor revisions were made to this section to be more consistent with other WLWB Licences. No party indicated any concerns with the revised language circulated in the Draft Licence.

Part H: Conditions Applying to Water and Waste Management and Schedule 6

Part H of the Licence contains conditions related to Waste management activities at the mine site, and is consistent with standard conditions found in previous water licences issued by the Board. New site

specific conditions were developed where necessary. Schedule 6 sets out the required contents of specific reports, plans, and investigations required by the conditions in Part H.

Management Plans

Schedule 6 of the Draft Licence required Management Plans to incorporate action levels and a description of the company's response if those action levels are exceeded.

When questioned at the Public Hearing, DDMI noted that they do have action levels built into the AEMP already, and in principle, weren't opposed to having action levels in other management plans "if it's a standard that's being used for all water licences" and that "if it's applied everywhere, it should and could be applied here as well". The Board notes that this requirement has been included in other recent WLWB Type A Water Licences (e.g., Fortune Minerals).

In their comments on the Draft Licence, however, DDMI stated that the requirements related to action levels are not consistent with the various approved Plans and duplicate conditions for the Contingency Plan (Schedule 7). They also added that:

"The additional new conditions have not been provided, with supporting rationale, as part of the renewal process and have not been subject to review, questioning or consideration of additional evidence. As drafted the condition could have significant potential to impact on DDMI's ability to effectively manage the facility. Daily decisions are made based on many monitoring results (internal and SNP) and general circumstances to manage the facility. A requirement to have these decision processes explicitly defined with Action Levels and response plans within a regulatory plan is not practical particularly when subject to a 90-day process to revise any aspect of the plan."

The Board disagrees with the DDMI argument that there has been insufficient review, questioning and consideration of these conditions, and that action levels would be impractical; the action levels would simply need to be written to provide enough flexibility to the Licensee.

The Board included requirements for action levels for the Lynx Lake Dewatering Plan required by the Ekati Water Licence; however, in that case, the requirement for action levels was included in part because, unlike DDMI's Licence, the Ekati Licence does not include EQC for waters associated with dewatering of Lynx Lake. There are no other requirements for action levels for management plans in the Ekati Mine Licence.

The Board is of the opinion that defining action levels can, in theory, be a useful means of ensuring that monitoring data is used to confirm that the objectives of certain management plans are being met. However, action levels in management plans are most effective if the Licence defines the objectives for the management plan in question, and links the requirement for monitoring to those objectives. The

NICO Mine Water Licence is written this way, and therefore action levels are clearly linked to the monitoring requirements and each plan's objectives. DDMI's Water Licence is not written this way, and for that reason, the Board concluded that requirements related to action levels for management plans should not be included in DDMI's Water Licence.

With regards to Management Plans, some Interveners were confused by the version-labelling of some of the plans. For example, GNWT-Lands commented that they were "not aware of any landfill management plan other than the one enclosed with this Water Licence Application (and a review of the WLWB registry also didn't reveal 17 versions of it on record)." The Board requires the Licensee to clearly indicate if a document is not Board-approved. Internal (or previously-internal) documents (e.g., the Landfill Management Plan submitted with the Application) which have never been submitted to the Board should be labelled as Version 1.0.

Finally, the Licence has been updated by adopting the Plan, Report, etc. names that have been used by DDMI in recent years. Moving forward, all required Plans, Reports, etc. submitted to the Board must use the naming protocol as set out by the Water Licence in order to minimize confusion.

Waste Management Plan

A Waste Management Plan was not required under W2007L2-0003. However, as the MVLWB's *Guidelines for Developing a Waste Management Plan*, 2011 require a Waste Management Plan in order for an application to be deemed complete, DDMI submitted a Waste Management Plan with their Renewal Application. The Plan submitted with DDMI's Application is an over-arching document, referring to several additional Plans:

- a. Hazardous Materials Management Plan (Version 17.0)
- b. Landfill Management Plan (Version 17.0)
- c. Sewage Treatment Plant Operations Plan (Version 6)
- d. North Inlet Water Treatment Plant Operations Plan (Version 2.0)
- e. Waste Rock Management Plan (Version 6.0)
- f. Processed Kimberlite Containment Facility Operations Plan (Version 2.1)
- g. Operational Phase Contingency Plan (Version 18)

Several of the above-mentioned plans are already required under W2007L2-0003 (i.e., those listed in paragraphs a, c, d, e, f, and g above). In addition to the Waste Management Plan, the following documents were submitted as appendices to the Water Licence Application:

- i. Hydrocarbon Impacted Materials Management Plan
- ii. Incinerator Management Plan
- iii. Solid Waste and Landfill Management Plan

DDMI noted in their closing argument that they "understood that one of the intents behind the *Guidelines for the Development of Waste Management Plan* was to consolidate and reduce the number

of management plans. The number of required management plans for DDMI is already a challenge to maintain and control.” The Board is uncertain then why DDMI submitted several different Waste Management Plan documents and believes it would be more straightforward for DDMI staff and reviewers if all components of the Waste Management Plan (i.e., Hydrocarbon Impacted Materials Management Plan, Incinerator Management Plan, Solid Waste and Landfill Management Plan) were all within a single document separated by chapter. Part H, Item 1, thus requires DDMI to submit a revised Waste Management Plan. Further direction regarding what is required in the revised Plan is outlined below.

Incineration

In their comments on the Application, GNWT-ENR recommended that DDMI:

- provide a robust composite residual ash sampling program, which includes taking a composite ash sample from each batch run and sending it for laboratory testing prior to the disposal of Waste in the non-hazardous onsite landfill;
- clarify whether the scrubber water is tested prior to disposal in the PKC; and,
- include temperatures of the incinerator primary and secondary chambers for each batch run in their record keeping and ensure they are consistent with the manufacturer’s recommended temperature settings.

In response, DDMI committed to providing detail about temperature recordings in the next revision of the Waste Management Plan, however, their response regarding incinerator ash and scrubber water testing was that the Incinerator Management Plan “conforms to the MVLWB Waste Management Guidelines as requested by the WLWB”. They noted that the Guidelines do not include a requirement for residual ash sampling or scrubber water testing. In accordance with the MVLWB’s *Water and Effluent Quality Management Policy*, the Board expects DDMI to make every attempt to prevent pollution from entering the environment, including from incineration. The Board believes incinerator ash and scrubber water are streams of Waste within the Board’s jurisdiction and therefore requires DDMI to outline a monitoring program for scrubber water and incinerator ash which includes identification of sampling parameters, with rationale, and sampling frequency in a revised Waste Management Plan (Version 1.1). This is consistent with other recent WLWB decisions regarding ash and scrubber water testing at major mines in the Wek’èezhìi Management Area.⁶³

GNWT-ENR also noted that:

“Hazardous waste in the NWT is managed according to the Guideline for the General Management of Hazardous Waste in the NWT (Guideline). DDMI is a registered generator NTG164 and is responsible for forwarding copy 1 of the hazardous waste movement

⁶³ See WLWB (www.wlwb.ca) Online Registry for [W2012L2-0001 – Ekati – Waste Management Plan – Version 1.0 – Directive and Reasons for Decision – Aug 11 14](#)

document to the Department of Environment and Natural Resources once the hazardous waste has been transported off site. The plan states that, "Completed forms are provided to the Government of the Northwest Territories by the receiving licensed facility."

The recommendation from GNWT-ENR was that DDMI revise Section 10 (Reporting of the Landfill Management Plan) to reflect DDMI's responsibility to manage hazardous Waste according to the Guideline for the *General Management of Hazardous Waste in the NWT* and forward the appropriate copy of the hazardous Waste movement document to ENR. DDMI committed to make the correction. The Board requires this information be included in Version 1.1 of the Waste Management Plan.

In their comments on the Application, GNWT-ENR noted that the Incinerator Management Plan does not explicitly state that plastics are removed from the Waste stream prior to incineration, that incinerator ash is tested prior to disposal in the landfill, that scrubber water is tested prior to disposal in the Processed Kimberlite Containment Facility (PKC), or whether primary and secondary chamber temperatures are recorded for each batch run. GNWT-ENR recommended that DDMI clarify that all plastics are removed from the Waste stream prior to incineration.

DDMI replied that:

"Waste management practices for plastics are described in Section 6.1.5 of the Diavik Diamond Mine Solid Waste and Landfill Management Plan January 2015. It states the following: Plastic wastes generated are mainly from food packaging, cleaning products and lubricants. Plastic containers that originally contained toxic or hazardous materials are fully drained before being stored in the WTA for off-site disposal. Plastic containers that contained nontoxic, non-hazardous materials will be disposed of in the inert landfill. Plastic waste from food containers is incinerated to prevent wildlife attraction."

In their Intervention, LKDFN stated that:

"LKDFN recognizes that the primary impacts from waste incineration are to air quality, but Environment Canada has made a connection between emissions from incinerators at mine sites and deposition in lakebed sediments (Wilson et. al 2011), making this pertinent. Additionally, LKDFN cannot find another venue to voice their concerns over this issue and is not aware of actions being taken to address it."

LKDFN is concerned with the emission of dioxins and furans from the incinerators and the possibility that these toxic substances could make their way into animals that are eaten by community members. LKDFN requests that the Board ask for clarification about the concentrations of polluting compounds emitted from the incinerators and management plans to prevent toxic emissions before approving the renewal of the water license."

Further, in their comment on the Application, GNWT-Lands requested that stack test results be provided to the Inspector upon request. DDMI responded that it is their “understanding that stack testing is not a requirement of the Water License and not included within the mandate of the WLWB”. The MVLWB Guidelines require that a Waste Management Plan must describe the source control and management for all Waste streams associated with the project, including incineration. However, the Board’s jurisdiction is related to water use and the deposit of Wastes. The Board has no primary authority over air quality, including air quality monitoring. Stack testing is in the Board’s view, more closely related to air quality management than to preventing the deposit of Waste to water.

As part of their Waste Management Plan, DDMI included their “*Diavik Health, Safety, Environment and Quality Policy*”. In this document, DDMI commits to:

- “Identify, eliminate, or otherwise control health, safety, environment and quality risks to our people, product, local communities and the environment in which we operate”;
- “Support a measurable commitment to quality processed which meets or exceeds our joint venture partner and customer requirements”; and,
- “Continually seek to reduce the environmental footprint of our operations and related activities”.

The Board notes that inappropriate incineration procedures (e.g., burning plastics), and not being transparent about stack testing, are inconsistent with the commitments made by DDMI in their *Diavik Health, Safety, Environment and Quality Policy*. The Board discourages DDMI from practices such as burning plastics and encourages DDMI to implement more environmentally friendly practices such as the use of compostable food containers or corn-based plastics that produce less harmful emissions and report stack testing results in an effort to fulfill their commitments. For example, Ekati has taken the step of using corn-oil based garbage bags, sugar cane based to-go containers, and biodegradable to-go utensils instead of traditional plastic products to help eliminate dioxin and furan emissions. The Board requires DDMI outline in Version 1.1 how they will remove potentially harmful Waste from their incineration stream and encourages DDMI to work with parties to determine an appropriate avenue for the reporting of stack testing results.

Landfarming

In their comments on the Application, GNWT-Lands recommended that a description of the active operational practices with regards to landfarming be included in the Hydrocarbon Impacted Materials Management Plan. DDMI committed to include this information. The Board requires this information be included in Version 1.1 of the Waste Management Plan.

Solid Waste and Landfill Management

As noted in previous direction,⁶⁴ the Board approved, in principle, that DDMI can dispose inert materials such as buildings, machinery, and equipment in the on-site landfill, but required DDMI to submit a Waste Management Plan. As noted in the Board's Guidelines for *Developing a Waste Management Plan and the Water and Effluent Quality Management Policy*, source reduction (i.e., reducing the generation of Waste) is the Board's preferred approach for preventing pollution. It is important to the Board that DDMI make all possible efforts to find uses (e.g., in the communities) for buildings, machinery, equipment, and other items no longer needed by the mine. The Board therefore required DDMI to submit a Waste Management Plan with the following information:

- Procedures for determining if buildings, machinery, and equipment are salvageable for reuse or resale
- Procedures for identifying any current or future off-site needs for salvageable buildings, machinery, and equipment
- Procedures for identifying and segregating materials for off-site recycling (e.g., scrap metal)
- Decontamination procedures to ensure the materials are inert, i.e., identifying and removing all oils, lubricants, batteries, bulk chemicals, hazardous materials, etc.
- Procedures for keeping records of what Wastes were recycled/reused off-site, what Wastes were disposed, and where they were disposed
- Rationale for selection of disposal location within the Waste rock pile
- Disposal procedures to be used, including efforts to be taken to ensure that disposed materials are physically stable and do not result in settling that might later compromise a Waste rock cover
- Information about how potential physical and chemical impacts of Waste disposal will be monitored

Section 6.1.9 of the Solid Waste and Landfill Management Plan submitted with the Application states that "Buildings that are no longer required and are not suitable for alternative uses are identified for decommissioning. If there is no inherent value in the building it is destroyed and placed in the landfill. If it has value it is not considered Waste and is identified for removal from site".⁶⁵ No other details are provided about the criteria used to make decisions. The Board requires that DDMI ensure the above-listed information is included in Version 1.1 of the Waste Management Plan.

Dust

In their Application, DDMI stated that:

"Dust deposition rates as recorded by dustfall gauges were greater than predicted in the environmental assessment. As a result, the magnitude of effect for current mining activity

⁶⁴ See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 – Diavik – 2012 Annual Progress Report – Board Decision Package – Feb 28 13](#)

⁶⁵ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Solid Waste and Landfill Management Plan – Version 1 – Jan 16 15](#)

changed from low in the environmental assessment to low – moderate. Consequently, the classification for level of effect has been modified to Level I - Level III Regional Effect”.

DDMI added that:

“Although dust monitoring results exceeded deposition rates predicted in the environmental assessment, there is uncertainty regarding the effect that these rates will have on vegetation. Results of on-going monitoring are expected to provide additional information to better understand this linkage.”

DDMI explained in their response to reviewer comments on the Application that in the Environmental Assessment, dust deposition predictions ranged from 5 mg/dm²/year in the north of the modelling domain to 100 mg/dm²/year over the portion of Lac de Gras adjacent to the A154 pit and that while dust deposition levels have remained below effects guidelines they have been measured in the range of 1000 to 1500 mg/dm²/year particularly in the early years of operations and near active construction or open-pit development. DDMI noted that “potential impacts of dust deposition considered in the environmental assessment included primarily caribou (dust on vegetation and earlier snow melt of areas near roads) and water quality through elements deposited to water.”

During the Public Hearing, DDMI noted that the two biggest sources of dust are the crushing facility, which has now been moved indoors, and roads. DDMI explained that the plan for roads is to water them as frequently as required to control the dust, however, that, although effective in the summer, it is a challenge in the shoulder seasons.

EMAB, in their Intervention, posed the question “...does DFO have any concerns with the levels of dust measured at Diavik in relation to this material possibly settling over spawning or nursery habitat in Lac de Gras?” DFO responded that they consider the “risk of accumulation of dust fall on spawning habitat to be low due to the effect of currents and wave action”. DFO recommended that “DDMI continue to work with appropriate parties to ensure that appropriate mitigation measures and best management practices are in place to minimize dust deposition in Lac de Gras”.⁶⁶

Further, dust deposited on land during operations may have impacts on caribou following closure of the mine. This is a concern raised by EMAB at the public hearing.⁶⁷ Although it is not yet clear whether dust will pose a problem and if so, for how long, the approved ICRP includes the following site-wide closure objectives: that dust levels be safe for people, vegetation, aquatic life, and wildlife; and that dust does not affect the palatability of vegetation for caribou. To minimize the likelihood that dust will pose a post-closure issue, it must be properly managed during operations.

⁶⁶ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – DFO Response to EMAB Intervention – May 26 15](#)

⁶⁷ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing - Transcript – May 28 15](#), page 116, lines 11-24

In their comments on the Draft Licence, DDMI stated that:

“Dust monitoring and mitigation is not included in the in the Board's Guidelines for Developing a Waste Management Plan and no intervenor recommended it be included in the Waste Management Plan. Dust monitoring and mitigation is not included in the Waste Management conditions specified in other licenses referenced. Dust monitoring and mitigation is not unique to the Diavik site.”

The Board is aware that dust is not listed as a waste stream in the MVLWB's Waste Guidelines, however, those Guidelines do not present an exhaustive list of all possible types of wastes. Also, the Board has required similar dust monitoring and mitigation plans from other Licensees (i.e., Fortune Minerals⁶⁸). Due to Intervener concerns expressed regarding the dust levels at the Diavik Site and the potential impacts to the surrounding aquatic environment and wildlife habitat/vegetation, particularly post-closure, the Board requires that DDMI include a section in their Waste Management Plan which details the mitigative actions DDMI has been taking, and will continue to take, in order to decrease the amount of dust generated on site and decrease the potential impact of project-generated dust on the surrounding environment. The Board requires that DDMI identify and discuss additional options of how to mitigate road-generated dust more effectively, particularly in the shoulder seasons (e.g., mitigations recommended by EMAB in the Public Hearing such as the use of chemical dust suppressant, changing tire sizes, truck speeds, etc.). For each option, the discussion should include a rationale as to why DDMI plans to reject or implement the option. The Board agrees with DDMI's concern regarding the number of management plans for the Diavik Mine, and have therefore decided to require dust mitigation as a component of DDMI's Waste Management Plan rather than a stand-alone plan.

In summary, Part H, Item 1, requires a Waste Management Plan (WMP) to be re-submitted to the Board with the following additional information:

Incineration Section

- description of record-keeping procedures for temperatures of the incinerator primary and secondary chambers for each batch run and ensure they are consistent with the manufacturer's recommended temperature settings;
- outline a monitoring program for scrubber water and incinerator ash (including identification of sampling parameters, with rationale, and sampling frequency);
- description of how DDMI will remove potentially harmful Waste (e.g., plastics) from their incineration stream;

Hazardous Materials Management Section

- hazardous Waste reporting;

⁶⁸ See WLWB (www.wlwb.ca) Online Registry for [NICO Mine – Water Licence – Jul 22 14](#)

Hydrocarbon Management Section

- active operational practices for landfarming;

Solid Waste and Landfill Management Section

- from the ICRP Annual Progress Report 2012:
 - Procedures for determining if buildings, machinery, and equipment are salvageable for reuse or resale
 - Procedures for identifying any current or future off-site needs for salvageable buildings, machinery, and equipment
 - Procedures for identifying and segregating materials for off-site recycling (e.g., scrap metal)
 - Decontamination procedures to ensure the materials are inert, i.e., identifying and removing all oils, lubricants, batteries, bulk chemicals, hazardous materials, etc.
 - Procedure for keeping records of what Wastes were recycled/reused off-site, what Wastes were disposed, and where they were disposed
 - Rationale for selection of disposal location within the Waste rock pile
 - Disposal procedures to be used, including efforts to be taken to ensure that disposed materials are physically stable and do not result in settling that might later compromise a Waste rock cover
 - Information about how potential physical and chemical impacts of Waste disposal will be monitored

Dust Management Section

- detail the mitigative actions DDMI has been taking, and will continue to take, in order to decrease the amount of dust generated on site and decrease the potential impact of project-generated dust on the surrounding environment
- identify and discuss additional options of how to mitigate road-generated dust more effectively, particularly in the shoulder seasons, for instance, by using dust suppressants, changing tire sizes, truck speeds, etc. For each option, provide a rationale as to why DDMI plans to reject or implement the option.
- outline the current dust monitoring programs in place

The Waste Management Plan is to be re-submitted within 90 days of the effective date of the Licence.

Mount Polley

Part H, Item 17 of W2015L2-0001 stipulates the following:

“Within six (6) months following the effective date of this Licence, the Licensee shall submit a Mount Polley Report Evaluation prepared by a Professional Engineer. The Report shall

assess the applicability of the recommendations in the Mount Polley Report to the Diavik Diamond Mine Project.”

This Licence condition has its genesis in the failure of the tailings storage facility at the Mount Polley Mine in British Columbia, on August 4, 2014. The dam breach resulted in a discharge of millions of cubic meters of Waste to the surrounding water bodies, with significant impact.⁶⁹ Following the failure, the Government of British Columbia, with the support of the Xats’ull First Nation and Williams Lake Indian Band, established an Independent Expert Engineering Investigation and Review Panel. The Panel released its *Report on Mount Polley Tailings Storage Facility Breach* (or the Mt. Polley Report) on January 30, 2015, shortly after DDMI initiated this Water Licence renewal proceeding.

Following the release of the Mt. Polley Report, the WLWB began an internal review, which is ongoing, of the Report recommendations to determine if and how they may impact the Board’s role in regulating dams. The Board anticipated that it would be unlikely to complete its review and implement any findings before renewing the Diavik Water Licence. To ensure that the Mt. Polley Report recommendations were considered during the renewal proceeding, the Board placed the Mt. Polley Report on the public record on April 23, 2015. The Board advised that “parties may submit comments or response to the Report with their public hearing interventions.” Later that day, the Board held a pre-hearing conference, during which there was some discussion about the reasons for placing the Mt. Polley Report on the record. The Board provided the following clarification on April 24, 2015:

“For clarification, the report in its entirety may be considered by the WLWB in preparing a renewed water licence for the Diavik mine; however Chapter 9 (“Where Do We Go From Here?”), which contains a number of recommendations regarding best practices, is likely to be of particular interest. The primary reason for placing this material on the record was to enable parties to review this evidence and consider whether any of the Mt. Polley Panel’s recommendations should be considered by the WLWB. Parties are welcome to address the relevance of the Panel’s specific recommendations in their interventions for the renewal licence.”

Intervenors made a number of recommendations regarding the Mt. Polley Report:

- NSMA Intervention (pages 3 and 4): *“Clearly, there are a number of technical and regulatory considerations that need to go into this before Diavik can adopt these recommendations. The NSMA recommends that DDMI work closely with the Regulators to develop the best way forward to incorporate the valuable lessons from the Mount Polley disaster.”*
- GNWT – ENR Intervention (page 12): *“Although ENR did not conduct an exhaustive review of the document, no water licence related items were identified for the Diavik Diamond Mine. Further,*

⁶⁹ <http://www.env.gov.bc.ca/eemp/incidents/2014/mount-polley/>

it is not clear if the findings from the report would apply to the PKC at Diavik. It would be beneficial to get DDMI's expert engineering opinion on the applicability of the failure mechanisms and geotechnical conditions and considerations between the two sites."

- GNWT – Lands Intervention (page 9): *"The Mt. Polley Report raises field-verified concerns about the Best Applicable Practices of tailings management historically/currently applied to tailings containment throughout Canada. Given its findings, an evaluation by a qualified engineer of the relevance of the Mt. Polley recommendations to the existing design & operational practices of the tailings management practices + facilities at Diavik does seem prudent. Such an assessment would benefit the file in at least two ways: (a) it might put concerns to rest or (b) it would identify aspects of the current dam/PKC tailings operation which need to be modified (through revised terms/conditions) to mitigate any potential (reasonable) risks."* At the public hearing, GNWT- ENR confirmed that it supports this recommendation.⁷⁰

At the Public Hearing, the Inspector from GNWT – Lands also commented that: *"This licence renewal is the perfect time to incorporate the terms and conditions and the management practices, the lessons learned from there into the new licence and do what we can reasonably do to ensure large-scale breaches don't occur."*⁷¹

DDMI provided its views on the matter in its response to interventions, its comments on the Draft Licence, and its closing argument. DDMI objected to Part H, Item 17, generally on the grounds that the condition is not unique to DDMI, that there is overlapping jurisdiction with the WSCC, and that any new requirements stemming from the Mt. Polley Report should be applied broadly as a policy or directive. These three arguments are discussed below.

DDMI suggested that the Board consider "if the Mt. Polley recommendations applied uniquely to the Diavik Mine site before considering an associated condition in W2015L2-0001."⁷² GNWT-ENR submitted that these recommendations were not unique to the Diavik mine and the Board agrees. The Mt. Polley Report addresses both the specific details of this event and makes recommendations about preventive action to ensure that such disasters do not occur at other mine sites in the future. In this context the Report has a bearing on this proceeding. DDMI suggests that the recommendations from the Report should apply "uniquely" to the Diavik mine before action is required of the Licensee. However, in the Board's view the public interest demands at least due diligence in relation to lessons resulting from the Mt. Polley event. The protection of water resources and the environment in Wek'èezhii from such incidents is essential. We see this as an opportunity for the Licensee to review the Mt. Polley Report in

⁷⁰ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing - Transcript – May 28 15](#), page 155, lines 3-6.

⁷¹ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing - Transcript – May 28 15](#), page 169, lines 16-20.

⁷² See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Closing Arguments – Jul 23 15](#), page 5.

relation to its mine and to assure both the Board and the public that its operations meet the highest standards.

The Mt. Polley Report made some very specific recommendations, for example regarding independent review boards, corporate governance, quality performance objectives, and more. The Board determined that there was not enough evidence to support Licence conditions to implement any of the specific recommendations individually. Instead, the Board drafted Part H, Item 17 broadly, which will allow DDMI to set the terms of reference and scope for the Mt Polley Report Evaluation in a way that makes sense in relation to the structures and operations at the Diavik mine. This approach is consistent with the recommendation made by the GNWT. The information about how specifically, if at all, the Mt. Polley Report recommendations might bear on the construction and maintenance of Engineered Structures at the Diavik mine is almost entirely in DDMI hands.

While the Board agrees with DDMI that an assurance process applied broadly to mines in its jurisdiction (such as that implemented by the B.C. government) may be reasonable, the Board has not completed its internal review of the Mt. Polley Report, and does not wish to assume what the outcome of the review will be. The inclusion of Part H, Item 17, reflects the reality that the release of the Mt. Polley Report coincided with the early stages of the Diavik Water Licence renewal proceeding, and that the Licence must be issued before the WLWB can finalize its review of the Report and implement a course of action. The Board understands that other organizations are also reviewing the Mt. Polley Report (e.g., the Mining Association of Canada,⁷³ of which DDMI is a member) and those organizations may revise their own guidelines. The Board would benefit from the results of these reviews and may not finalize its own assessment of the Mt. Polley Report in the near future. The requirement in Part H, Item 17 will ensure that DDMI proactively considers the Mt. Polley Report recommendations while the Board completes its internal review. The Board is of the view that the effort to produce the Mount Polley Evaluation Report will not place an undue burden on DDMI, particularly since DDMI has already initiated a review of the Mt. Polley Report recommendations, and plans to continue discussions with the Diavik Geotechnical Review Board on this topic in September 2015.⁷⁴

Also, the Board is not convinced by DDMI's assertion that overlapping jurisdictions between the WSCC and the WLWB precludes a Licence condition addressing the Mt. Polley Report. This matter is discussed in more detail below, in relation to Part H, Items 24 and 25.

Dam Safety Reviews

Water Licence W2007L2-0003 did not include a requirement for DDMI to submit Dam Safety Reviews (DSRs) to the Board. DSRs are a central component of the safety management system established in the Canadian Dam Association's *Dam Safety Guidelines*. As described in the Guidelines, a DSR is a

⁷³ <http://mining.ca/news-events/press-releases/mac-strikes-independent-task-force-review-its-tailings-management-program>

⁷⁴ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing - Transcript – May 28 15](#), page 61, lines 23-25; and page 62, lines 1-16.

“systematic review and evaluation of all aspects of design, construction, operation, maintenance, processes, and other systems affecting a dam’s safety, including the dam safety management system”.

The Water Licences for the NICO Mine and the DeBeers Canada Gahcho Kue Mine include conditions requiring DSRs. These two Licences were issued in 2014 by the WLWB and MVLWB respectively. The conditions require submission of the review engineer’s report and an implementation plan outlining how the Licensee will respond to each of the engineer’s recommendations. The Draft Licence for the Diavik mine included the same requirements regarding DSRs. DDMI objected to these requirements, stating that:

“It has not been demonstrated that this condition is required uniquely for Diavik. As noted in Diavik’s submission and presentation at the Water License Hearings, if Dam Safety Reviews and Reporting is a general requirement of the LWBs then it should be introduced via policy or broad directive rather than a license condition. We found no evidence that this new condition was recommended by an Intervenor, with supporting rationale, as part of the renewal process and has not been subject to review, questioning or consideration of additional evidence. We also remind the Board of our submissions regarding the need to clearly define the roles of the LWBs and the WSCC with regard to dam safety reviews.”

The Board disagrees with DDMI. First, DDMI was provided substantial opportunity to comment on this matter throughout the Renewal proceeding. The Board required information about DSRs in DDMI’s Licence Renewal Questionnaire, and Board staff requested additional information in staff’s comments on the Application.⁷⁵ After the Technical Sessions, the Board required DDMI to submit the most recent DSRs (Information Request #10). Also, DDMI was questioned about these specific conditions at the Public Hearing,⁷⁶ and was again provided an opportunity to comment on the conditions in the Draft Licence. Finally, DDMI addressed this topic in its closing argument.

Second, the Board does not establish a specific policy each time it determines a new condition is warranted. This approach is unnecessary, impractical, and inefficient. The Board takes into consideration MVLWB policies and guidelines, conditions in previously-issued Licences, the evidence filed for the proceeding in question, the Board’s legislative mandate, and other relevant information in deciding when to impose new licence conditions.

Finally, the Board does not share DDMI’s concerns about the potential for jurisdictional overlap between the GNWT Workers’ Safety and Compensation Commission (WSCC) and its authorities under the *Mine Health and Safety Act*⁷⁷ and associated regulations,⁷⁸ and the Board and its authorities under the Act and

⁷⁵ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Application - Review Summary and Attachments – Mar 26 15](#), WLWB Comment #2.

⁷⁶ See WLWB Online Registry for [Diavik – WL Renewal – Public Hearing - Transcript – May 28 15](#), pages 58 and 59.

⁷⁷ S.N.W.T. 1994, c.25.

regulations the *Mackenzie Valley Resource Management Act*. DDMI did not raise this matter formally as a jurisdictional issue with the Board at any time in the proceeding. It did not challenge Board authority to address dam safety in the context of water resource or environmental protection, nor did DDMI provide any evidence to show that the dam safety items in the Draft Licence were outside the Board's authority. Finally, DDMI did not file the relevant WSCC statutory and regulatory materials to show where and how this alleged duplication operates. In the Board's view this leaves the argument about potentially overlapping jurisdictions and the consequential problems created for DDMI largely without foundation.

It is not unusual for more than one regulatory regime to apply to a major industrial enterprise. In fact it would be unusual if that were not the case. The cases addressing statutory interpretation make it clear that overlap is not in itself a problem and that regulators, and the courts, should strive to find interpretations of the law which achieve the objects of all applicable legislation. The Board regularly operates in a regime where it manages water use and the deposit of Waste in relation to the same water bodies which are under *Fisheries Act* jurisdiction and the management of both Environment Canada and the Fisheries and Oceans Canada.

The WSCC manages mining activity with a view to protecting the health and ensuring the safety of workers. The Board manages mining activity in order to conserve and protect water resources. Both of these objectives may require consideration of dam safety.

DDMI says that it already conducts reviews of dam safety for the WSCC and that the conditions proposed in the Draft Licence will result in "regulatory duplication and place an unnecessary additional requirement on DDMI."⁷⁹ There is no reason that schedules for inspections and reporting by DDMI cannot be harmonized to meet both WSCC and Water Licence requirements. To the extent that both agencies require common information, report scope and content can likely be harmonized as well, if it is not already. The format of the DSR Report and the Implementation Plan required by the Water Licence is not prescribed, other than that the DSR Report is expected to conform with the *Dam Safety Guidelines*. The reporting format is therefore flexible and can be harmonized if necessary.

In its argument DDMI requested that the Board provide clarity in its Reasons for Decision on the roles and responsibilities of the LWBs versus the WSCC. In the absence of an application by DDMI for a ruling by the Board on its dam safety jurisdiction, these reasons are not the place for such a dissertation. In any event, the Board lacks the authority, knowledge and evidence to speak to the role of the WSCC. DDMI also asked that the Board confirm that the new dam safety Licence requirements will apply to all

⁷⁸ R-125-95.

⁷⁹ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Closing Arguments – Jul 23 15](#), page 6.

NWT dams. The Board has no authority over any area outside Wek'èezhii and is unable to address this request either.

The Board is aware that the dam safety reviews submitted in response to IR #10 demonstrate good dam safety management for the Diavik dikes. For example, the 2013 DSR for the A154 Dike says that “the stewardship of the A154 Dike continues to be of a very high standard and the performance of the dike to date has met or exceeded design expectations.” The review engineer who conducted the DSR for the A418 Dike also commended DDMI for its stewardship of the dike, and highlighted the benefits of DDMI’s knowledgeable staff, the ongoing involvement of the engineer of record, and the regular review provided by the Diavik Geotechnical Review Board. The engineer also added that the dike performance has met or exceeded design expectations and all internationally accepted standards. The Dam Safety Review for the PKC dams was not quite as favourable, although the review engineer concluded that the dams are safe.

Regardless of the quality of DDMI’s current dam safety management, the Board determined that Part H, Conditions 24 and 25 are appropriate means of ensuring that the Diavik dams (including dikes) continue to meet current dam safety requirements. As noted by the Canadian Dam Association, a dam safety review provides “independent assurance that the dam meets current safety requirements” (page 18 of the DSG). The reports required by these conditions provide a practical and useful tool for the Board and the Inspector to evaluate compliance with Licence conditions related to dam safety. DDMI is already conducting DSRs, and the Licence conditions do not require Board approval of such reports; therefore, the Board concludes that the new conditions should not present an undue burden on the Licensee. The Board has determined that these conditions are within the Board’s authority, are practical, enforceable, and do not conflict with existing legislation.

Finally, the Board notes that the deadlines for the submission of the DSR reports are consistent with the *Dam Safety Guidelines*, and are as requested by DDMI.⁸⁰

Hydrocarbons in the North Inlet

The Board has added two new conditions to the Licence in order to address concerns regarding hydrocarbons in the North Inlet. Part H, Items 18 and 19, require the submissions of a North Inlet Hydrocarbon Investigation Report and a North Inlet Sludge Management Report, respectively. The requirements of these reports are detailed in Schedule 6. In addition, further requirements have been added to the Contingency Plan, as detailed in Schedule 7, Item 1, and the Surveillance Network Program, as described below. These two plans, although related, address different aspects of the problem of hydrocarbon contamination in the North Inlet, and are discussed separately below.

⁸⁰ Although the review engineer that conducted the 2010 DSR for the PKC Facility recommended that the next DSR be in 2015, in its closing argument, DDMI submitted evidence that 2017 is a suitable deadline.

Hydrocarbon Investigation Report

DDMI uses the North Inlet of Lac de Gras to hold wastewater before it is treated, and to dispose of sludge, the by-product of the water treatment process at the North Inlet Water Treatment Plant (NIWTP). During construction of the Diavik site, a dam was built to isolate the North Inlet from Lac de Gras to ensure that contaminated wastewater meets EQC before going into Lac de Gras.

In DDMI's North Inlet Quarterly Status Report,⁸¹ it was found that petroleum hydrocarbons (PHCs) and polycyclic aromatic hydrocarbons (PAHs) were repeatedly detected in samples from SNP 1645-75, which monitors water from the underground, and in samples of NIWTP sludge. The report concluded that the contaminants causing toxicity in the North Inlet sediments are originating from the underground mine water and are transferring through the North Inlet to the NIWTP, where they become part of the sludge. The study concluded that the ultimate source of the contaminants is lubricating oils from the mine.

In EMAB's Intervention, it was noted that the hydrocarbon-contaminated sediments and in the North Inlet dam was their top concern. In the Intervention, EMAB stated that:

"EMAB is concerned about hydrocarbon inputs into the North Inlet sediments. This continues to be a problem, as the latest SNP report (February) plainly shows. In fact, North Inlet Sediments have been shown to be acutely toxic to Amphipods (a)".

and,

"DDMI has identified PAHs and PHCs in North Inlet sediments that it believes are from heavy machinery lubricants in underground mining. However, EMAB would like to investigate another source. Aircraft de-icing occurs at east end of the airstrip and helicopter refueling occurs at the helipad halfway between the airstrip and the westernmost end of North Inlet. (DDMI 2014a) Since both the airstrip & the helipad drain towards the North Inlet, this suggests the inlet is intended to receive any spilled hydrocarbons and antifreeze from the airport. The airport is thus a potential source of hydrocarbons and de-icing antifreeze compounds to N Inlet. Yet there is no sampling of hydrocarbons or oil & grease at SNP stations 1645-12 or 1645-13 (N Inlet west and east cells) required in the water license (however, the special study of North Inlet Quarterly Status Report - Q3 [Table 1] showed hydrocarbon content was below detect in water directed into the treatment plant at 1645-13)."

EMAB's Intervention recommendations were as follows:

"(a) DDMI should indicate what mitigation measures it has put in place to significantly reduce or eliminate this contamination source.

⁸¹ See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 - Diavik – ICRP – Version 3.2 - North Inlet Quarterly Status Report – Q3 2013 – Nov 8 13](#)

(b) Also, there are no Effects Benchmarks set for Oil & Grease or TPH in the AEMP. The current condition of sediments in NI now warrants establishing such a Benchmark.”

Under Water Licence W2007L2-0003, on February 19, 2014, the WLWB issued a directive to DDMI that included the following requirements:⁸²

- 1) Updating the Operational Phase Contingency Plan (OPCP) with:
 - a. descriptions of source control measures to minimize hydrocarbon contamination;
 - b. details of improved spill reporting procedures; and,
 - c. Hydrocarbon management performance tracking including a monitoring program.
- 2) Bi-weekly hydrocarbon monitoring for PHC F3 - 1645-75 and NIWTP Sludge - with reporting in the monthly SNP and the Annual Water Licence Report.
- 3) Repeat the North Inlet Sediment Study in 2015 to inform closure decisions and actions.

DDMI has been providing the information required by the directives in (1) and (2) above, and has committed to the North Inlet Sediment Study in 2015; however the source of contamination has not been conclusively determined and it is therefore not clear that the best mitigations are in place. Therefore, the Draft Licence required that DDMI submit a Hydrocarbon Management and Monitoring Plan to the Board for approval. The draft condition stated that the objective of this Plan “is to identify sources of hydrocarbon contamination in the North Inlet Facility, identify appropriate mitigations to reduce hydrocarbon contamination, and monitor the performance of any mitigations”.

NSMA, in their closing argument, stated that they supported the addition of a Hydrocarbon Management and Monitoring Plan and added that:

“Hydrocarbon contamination has become a major problem in the North Inlet. As the Closure and Reclamation phase approaches, it is critical for the NSMA members that this issue (is) addressed properly. As one of the major, ongoing, and persistent pollutants from the Diavik mine, placing hydrocarbon management in the Operational Contingency Plan does not suffice as a ‘solution’”.

EMAB also supported the addition of a Hydrocarbon Management and Monitoring Plan in their closing argument.

As evidenced by their comments on the Draft Licence, DDMI was opposed to the inclusion of this condition stating that:

⁸²See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 - Diavik – ICRP – North Inlet Quarterly Status Report – Q3 2013 – Board Decision Package – Feb 19 14](#)

“DDMI has provided specific evidence as to the source and nature of the North Inlet hydrocarbon contamination through the North Inlet studies and continued hydrocarbon monitoring. The WLWB has reviewed and accepted these findings as have other reviewers. EMAB did not comment on these findings (at the time or in their intervention) and have provided only conjecture regarding "aircraft de-icing" and "helicopter refueling" but have not tied any of this to the actual findings of the north inlet sediment studies - in particular the conclusion that the sediment contamination is lubricating oils”.

The Board considers it premature to confirm the DDMI assertion that they have “*provided specific evidence as to the source and nature of the North Inlet hydrocarbon contamination through the North Inlet studies and continued hydrocarbon monitoring*” because DDMI recently indicated that they are not seeing trends linking spills in the underground to hydrocarbon levels in the NIWTP sludge. As noted in the recent 2014 Annual Water Licence Report:⁸³

“Based on the data set to date (May-Dec 2014) there is no clear trend or correlation linking PHC F3 concentrations in underground water (1645-75) to PHC F3 concentrations in clarifier sludge, see Figure 26.1. Elevated or decreased PHC F3 in underground water do not have a corresponding increase/decrease in measured PHC F3 in clarifier sludge on the same day or in the following sample period two weeks later (i.e. there is no immediate or a delayed linkage between the two). Given the limited data set and lack of any noticeable trends, linking PHC F3 concentrations in mine water and clarifier sludge to the success of the above noted management practices is not practical at this point in time. Diavik will continue to collect the data and analyze for trends as directed by the Board but notes that we may never see such a correlation.”

The Board has therefore decided:

- 1) a North Inlet Hydrocarbon Investigation Report be completed in order to identify the sources of hydrocarbon contamination being directed to the North Inlet Facility.
- 2) the following requirements should be added to the Contingency Plan to address the ongoing mitigation of hydrocarbon contamination:
 - a. a summary of the Licensee’s current practices for minimizing hydrocarbon contamination ;
 - b. details of improved spill reporting procedures; and,
 - c. hydrocarbon management performance tracking including a monitoring program; and,
 - d. a description of proposed mitigations to minimize hydrocarbon contamination and a schedule for implementation; and,

⁸³ See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 - Diavik – 2014 Annual Water Licence Report – Updated – May 20 15](#)

- 3) total petroleum hydrocarbons be added to the Surveillance Network Program at SNP Stations at the NIWTP Influent (1645-13), PKC Pond Water (1645-16), NIWTP effluent (1645-18/18B), and NIWTP sludge (#1645-85A/B, 1645-86A/B) on a permanent basis;

These requirements will ensure that DDMI is making best efforts towards reducing or eliminating the hydrocarbon-related toxicity of the north inlet sediments, by identifying the source of the contamination, improving best practices, and monitoring the performance of these practices.

Report on North Inlet Sludge Management

The Licence also includes a requirement for a Report on North Inlet Sludge Management, with the objective of determining whether North Inlet Water Treatment Facility sludge should be disposed in an alternative location in order to meet the closure objectives in the approved Closure and Reclamation Plan. Regardless of whether toxicity in the north inlet sediment is reduced or eliminated, the post-closure fate of the north inlet has yet to be determined. When the environmental assessment for the project was completed, it was not known whether the North Inlet would be reconnected with Lac de Gras after closure. Although the closure objective for the North Inlet is to reconnect it with Lac De Gras, it is possible that sediment quality in the North Inlet will not be suitable for aquatic life, and reconnection will not be possible.

In order to resolve this issue, the Board has repeatedly requested information from DDMI,⁸⁴ including requirements to compare the costs and benefits of the various sludge disposal options, to little or no avail. For example, as explained in the Board's June 20, 2013 directive:

When the Board approved ICRP V3.2, the Board requested status reports on this issue so they can be sure the company is resolving this issue as quickly as possible. It has been approximately 21 months since the Board requested progress reports to address this uncertainty and the company has not demonstrated to the Board that the continual placement of sludge in the North Inlet will not jeopardize a full connection to Lac de Gras.

DDMI's North Inlet Reclamation Research Plan (in the approved ICRP) poses the question: "Does the disposal of NIWTP sludge in the north inlet pose an unacceptable human or ecological risk, now or at closure, such that management action is required." Although this question was scheduled to be answered by 2013, the Board has yet to see any formal submissions regarding DDMI's findings. Further, at the Public Hearing, DDMI indicated that they have already determined that sludge can continue to be placed in the North Inlet,⁸⁵ (i.e., that no management actions are required), despite the fact that the Board was not involved in this decision and was not provided with supporting information.

⁸⁴ For example, see [Board Directive May 19, 2010](#), pages 13-15; [Board Directive May 10, 2011](#); [September 26, 2011 Board Decision Package](#), pages 2-3; [Board Directive June 20, 2013](#); [Board Decision Package Feb 19, 2014](#), etc.

⁸⁵ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing - Transcript – May 28 15](#)

Whether sludge should be placed somewhere other than the North Inlet should be resolved quickly, since the continued placement of potentially toxic sludge in the North Inlet may jeopardize closure objectives, or reduce the feasibility of any of the sludge disposal alternatives (e.g., selective dredging). Based on the Board's lack of success in obtaining useful and timely information on this important and time-sensitive matter, the Board concluded that the North Inlet Sludge Report is justified.

Engineering Standards

In their comments on the Draft Licence, DDMI requested several changes to the timing of inspections. For Part H, 21 (f) and 22 (f), they note that "the condition specifies inspections be complete in July where we understand the intent is that they be complete during thawed summer conditions", request "flexibility beyond July", and recommended replacing "July with between June and September". Similarly, for Part H, 20 (g) and 23 (f), they note that "the condition specifies inspections be complete in August where we understand the intent is that they be complete during ice-free period", requested "flexibility beyond August", and recommended replacing "August with ice-free period". The Board has not determined that this request is unreasonable, but would like additional information to support the revised dates. For this reason, and because compliance dates in the Licence can be changed at the Board's discretion, the Board did not adopt DDMI's recommendation.

Effluent Quality Criteria

In Part H, Items 26 to 29, the Board has revised the condition stipulating the EQC for the Project (Part H, Item 6 of W2007L2-0003). The language and structure of that condition was complex, as acknowledged by DDMI in its closing argument (page 7), and left room for misunderstanding about which Waste streams are authorized for Discharge. The Board has clarified the condition, but lacked the information to remove all complexity and ambiguity without risking an inadvertent change to the way in which the Diavik mine is regulated. The Board concluded that, when read in combination with other parts of the Licence, the new language in Part H, Items 26 to 29, is sufficiently clear to provide certainty for the Licensee. Any remaining concerns can be addressed through the Water Management Plan and the Annual Report, to which new requirements have been added related to authorized Discharges. These matters are discussed in more detail below.

In the Draft Licence circulated for parties' comment, Board staff attempted to improve the clarity of Part H, Item 6, by adding a new condition (Part H, Item 1) that explicitly named all Waste streams that are authorized for Discharge to Lac de Gras. These same Waste streams were named again in the condition stipulating the EQC (Part H, Item 25, of the Draft Licence). This approach left no ambiguity about what Discharges were authorized. The proposed list of authorized Discharges was based on conditions in Water Licence W2007L2-0003 that explicitly authorized certain Waste streams for Discharge, provided EQC are met. These Waste streams are: effluent from the NIWTP; hydrostatic testing water; dike seepage; and water associated with dewatering.

The list of authorized Discharges in the Draft Licence was also based on DDMI statements at the Public Hearing that there are no other Waste streams discharged to Lac de Gras during operations, aside from possibly runoff.⁸⁶ Staff also proposed to delete Part H, Item 6(d) of the Licence, which stated that “all other discharges” must meet EQC because the condition would not be necessary if all authorized Discharges were listed.

DDMI commented as follows on the draft condition that explicitly authorized certain Discharges (Part H, Item 1 of the Draft Licence):

“The condition is not consistent with other conditions. The intent of the condition should be that the Licensee is authorized to Discharge provided the Effluent Quality Criteria (EQC) are met. The source of the water should not be relevant. For example dike seepage can be Discharged provided it meets EQC (see for example Part H, 18, e).”

DDMI’s recommendation on the Draft Licence was to “reword to clarify that the Licensee is authorized to Discharge if the Effluent Quality Criteria are met and remove reference to specific sources of water”.

Although the Board agrees that dike seepage that meets EQC is a waste stream that should have been on the list of authorized Discharges,⁸⁷ the Board did not adopt DDMI’s recommendation because it is inconsistent with the Licence. There are certain Waste streams that cannot be discharged to Lac de Gras even if they meet EQC. Specifically, W2007L2-0003 and N7L2-1645 prohibit three Waste streams from being Discharged to Lac de Gras, namely: seepage from the PKC Facility; seepage from the North Inlet west dam; and seepage from the Drainage Control and Collection System.⁸⁸ These Waste streams must be collected and returned to the wastewater management systems.

In their comments on the Draft Licence, DDMI also recommended that these three conditions be revised to allow DDMI to Discharge these Waste streams, if they meet EQC. The Board did not adopt this recommendation either. Unlike dewatering water, and at least to some extent dike seepage, the three Waste streams addressed by these conditions are reasonably likely to contain contaminants from tailings, Waste rock seepage, or water from underground and pit sumps. The Board concluded that these conditions were in place to ensure that those three Waste streams are treated before Discharge, and to limit the possibility that contaminated water could enter the Receiving Environment.

This conclusion is supported by statements made in the original document describing the development of EQC for the Diavik Licence. For example, in the section of the document where numerical EQC are derived, the authors addressed discharge from the drainage control and collection system as follows:

⁸⁶ Ibid, page 68, lines 20-25 and page 69 lines 1-20.

⁸⁷ Board staff inadvertently omitted dike seepage from the list of authorized discharges.

⁸⁸ See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 – Diavik – Water Licence with SNP and Schedules – Updated Security – Apr 9 15](#), Part H, Items 1.b, 4.d, and 2.b, respectively.

*The collection ponds are part of the containment system that will be built around the PKC and the country rock storage areas. It is recommended that no discharge of the water from these ponds to Lac de Gras be permitted.*⁸⁹

This contrasts with statements in the same report that recommend that discharge of dike seepage to Lac de Gas be permitted “if it meets the EQCs that have been specified for the main effluent outfall”.⁹⁰

These statements lead the Board to conclude that the three conditions prohibiting discharge of certain seepage to Lac de Gras were carefully considered and intentional. Regardless, DDMI did not request the elimination of the three conditions prohibiting the release of these Waste stream in their Application. In the Board’s view, this would be a significant change to the Licence and DDMI has provided no evidence to support this recommendation.

It is possible that DDMI may have interpreted Part H, Item 6(d) of W2007L2-0003, which stated that “all other discharges must meet EQC” differently than the Board. This condition is not meant to override the three conditions prohibiting certain discharges. It simply means that whatever Waste streams DDMI Discharges (in accordance with its Licence) must meet EQC. To ensure there are no further misunderstanding about this condition, the Board added the words “authorized” to Part H, Item 6 d) (now Part H, Items 27 and 29). Although not strictly necessary, the revised conditions better reflects the three Licence conditions that restrict Discharge of certain seepage streams.

In their closing arguments (page 7), DDMI stated that:

“The W2015L2-0001 proposed changes to definitions and conditions in Part H – Effluent Quality Criteria on top of the existing complex W2007L2-0003 language has resulted in unintended changes to the requirements to be met before a water can be discharged to Lac de Gras. Conditions that define an authorized discharge are central to the water license and the language should be clear and unequivocal.”

The Board agrees with DDMI that the Licence conditions around authorized Discharges should be clear and unequivocal. To achieve this goal, the Board again attempted to identify a list of discharges that could be explicitly authorized in the Licence, this time by issuing an Information Request.⁹¹ The stated purpose of the Information Request was to “ensure that the Board has clear and complete information regarding the types of Waste streams authorized under DDMI’s Water Licence, and specifically as a result of DDMI’s comments on the Draft Licence and closing arguments related to Part H, Item 1”.

⁸⁹ Development of Effluent Quality Criteria for the DDMI Class A Water Licence: Recommendations to the NWT Water Board, April 2000, page 48.

⁹⁰ Ibid, page 49.

⁹¹ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – Information Request to DDMI Following Closing Arguments – Jul 29 15](#)

Unfortunately, in its response to the Information Request, DDMI did not clarify which streams it believes are authorized for discharge to Lac de Gras, but instead identified what appears to be all or most wastewater streams at the mine, regardless of whether they are discharged to Lac de Gras or are sent to the North Inlet for treatment. Although the Board would prefer to draft a Licence which very clearly distinguishes between authorized and unauthorized discharges, the Board has been unable to do so without risking inadvertent prohibitions on Discharges that were previously authorized, or inadvertently authorizing Discharges which should not be authorized.

To ensure there is clarity about what Discharges are authorized, the Board added a requirement to DDMI's Water Management Plan (Schedule 6, Item 1(b)) requiring identification of the Waste streams that are Discharged to Lac de Gras without treatment. The Water Management Plan is to be re-submitted within 60 days of the effective date of the Licence. This new requirement will ensure all parties clearly understand which Discharges are authorized. The Board also added a requirement to report Discharged volumes of any of these Waste streams in the Annual Report. This information may also support analysis of AEMP data, should any of these Waste streams be contributing to impacts on Lac de Gras.

In their comments on the Draft Licence, EC, EMAB, and DDMI recommended that the EQC and SNP sampling for Oil and Grease be revised to address Total Petroleum Hydrocarbons (TPH). TPH is a better indicator of the hydrocarbons that would be present in the case of hydrocarbon spills, leaks, etc. whereas Oil and Grease is more relevant to kitchen Wastes and sewage. Considering the points identified with respect to hydrocarbons at site, the Board has revised the EQC to address TPH rather than Oil and Grease. Accompanying changes made to the Surveillance Network Program are described below.

As noted in the DDMI Water Management Plan,⁹² effluent from the Sewage Treatment Plant is directed to the PKC (and eventually to the NIWTP). The EQC table for sewage has been removed from the Licence as the parameters in this section were redundant with those in the main EQC table, which applies to effluent from the NIWTP.

Sulphate EQC

In their Intervention, EMAB noted that:

"From 2013 Waste Rock Reclamation Research we learn that Chloride, Nitrate & Sulphate produced from the blasting process are main leachates from Waste Rock test piles. Sulphate oxidizes from sulfur in the rock. Type III rock produces more sulphate than Type I due to greater amount of biotite schist. Chloride & Nitrate should dissipate in leachate as time goes

⁹² See WLWB Online Registry for [W2007L2-0003 - Diavik – Water Management Plan – Version 13 – Dec 30 14](#)

by but Sulphate may not since S continues to oxidize within the rock pile. This would suggest that an EQC for Sulphate is warranted for closure to address conditions of the frozen core of the rock pile thawing unexpectedly...If DDMI is given a 15-year license then EMAB is concerned an EQC for rock pile-generated sulphate may not be enforceable after the mine is closed."

During the Public Hearing, EMAB added that they believe *"the EQC for sulphate is needed for closure to address conditions of the core of the rockpile not completely freezing as expected or a frozen core thawing unexpectedly"*. In their closing arguments, EMAB recommends that *"an EQC for sulphate in seepage water from both the waste rock pile and the PKC is needed to safeguard both aquatic and terrestrial life"*.

In their response to Interventions, DDMI noted that it *"commits to including in the ICRP water closure criteria for ... sulphate in waste rock pile seepage...including these in ICRP V4.0 assuming a December 2016 submission date"*.

The Board notes that sulphate is a parameter for which sampling and analysis is required in the Surveillance Network Program at many stations including the one measuring PKC pond water (1645-16), main effluent discharge (1645-18), and Waste rock pile seepage collection ponds (e.g., 1645-67, 1645-68, 1645-76). Furthermore, Sulphate is measured as part of the Aquatic Effects Monitoring Program. Considering that the Board has decided that a 15-year term is not practical at this time, and acknowledging that the EQC will need to be revisited for the Closure scenario, the Board believes that an EQC for sulphate is not currently required. This may be further investigated at a later time, during closure and reclamation planning, and in the development of EQC's for closure.

Protocols for Toxicity Testing

In the Draft Licence, Part H, Items 8, 9, and 10 of W2007L2-0003 were removed as the conditions have been satisfied.^{93,94,95} In their comments, GNWT-ENR recommended that the conditions regarding *Hyalella azteca* toxicity testing could be *"built into the Ammonia Management Plan requirements if ammonia triggers are exceeded"*. The Water Licence requires that DDMI submit an updated Ammonia Management Plan 12 months prior to pre-stripping of the A21 pit.⁹⁶ The Board recommends that DDMI address GNWT-ENR's comments in their next revision of the Ammonia Management Plan.

⁹³ See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 – Diavik – Toxicity Testing – Board Decision Package – Mar 19 08](#)

⁹⁴ See WLWB (www.wlwb.ca) Online Registry for [W2007L2-0003 – Diavik – Chronic Toxicity SES Design – Board Decision Package – Jun 11 08](#)

⁹⁵ See WLWB Online Registry for [W2007L2-0003 – Diavik – Nitrate EQC Review – Board Decision Package – Sep 5 12](#)

⁹⁶ In their [response to reviewer comments on the application](#), DDMI recommended an updated Ammonia Management Plan be submitted to the Board 12 months prior to pre-stripping of the A21 pit.

Part I: Conditions Applying to Contingency Planning and Schedule 7

Part I of the Licence contains conditions related to spill contingency planning and reporting, as well as reclamation of spills and Unauthorized Discharges. The purpose of this Part is to ensure that the Licensee is fully prepared to respond to spills and Unauthorized Discharges. The planning and reporting requirements ensure that DDMI has identified the lines of authority and responsibility for spill response, established reliable reporting and communication procedures, and has an action plan in the event of a spill. This will ensure that any spills or Unauthorized Discharges are effectively controlled and cleaned up, with the goal of preventing or minimizing damage to the Receiving Environment.

Revisions were made to this section in order to be more consistent with other WLWB Licences. Requirements for the Contingency Plan have been relocated to Schedule 7.

Part J: Conditions Applying to Aquatic Effects Monitoring and Schedule 8

The conditions applying to aquatic effects monitoring in W2015L2-0001, including the addition of new conditions, are similar to those in other water licences issued by the Board.

The Draft Licence circulated noted that it was unclear which of the Special Studies listed in Part K, Item 5 had been completed. In their comments on the Draft Licence, DDMI stated that the *“condition could be removed as all conditions have either been met or are included in AEMP or other monitoring programs”*.

In their comments on the Draft Licence, EMAB stated:

“Part J.5 lists nine special studies on potential impacts to Lac de Gras that DDMI had to conduct. But there is uncertainty over which of them have been adequately completed (WLWB’s comment #S99 in the draft license). EMAB suggest that this uncertainty in the AEMP condition should be resolved before the water license is renewed, since this license item cannot be revised without knowing which mandated studies can be removed (satisfactorily completed) and which need to be retained (not begun or completed as of yet) in the renewed license. To that end, we would look for WLWB direction to DDMI to provide a complete list of all completed special studies and their most important results.”

DDMI responded:

“The AEMP is designed to address the requirements of the Water License including the special effects studies. The AEMP Design has been approved by the WLWB. DDMI directs EMAB to the AEMP Design Plan for the requested information [sic].”

NSMA, in their closing argument, added that *“in reference to EMAB’s comments on Draft Licence no. 3 ‘AEMP Special Studies’, and DDMI’s response to it, NSMA would like to simply state that we believe important requirements such as those should be clearly included in the body of the licence”*.

The Board has not been able to confirm if all of the Special Studies required in W2007L2-0003 have been completed and approved, therefore they have been listed in Schedule 8, Item 5 of W2015L2-0001. DDMI should submit documentation (e.g., proof of approval, specific references to approved AEMP Design, etc.) to the Board that these study reports have been approved.

Part J, Items 6 through 8, are new conditions added to reflect the Response Framework that is part of DDMI's approved AEMP Design. These have been added to reflect the Boards' Draft *Guidelines for Adaptive Management – Response Framework for Aquatic Effects Monitoring* and have become standard conditions in other recent WLWB Type A Water Licences (e.g., Ekati and NICO).

In their closing arguments, DDMI stated that:

“Providing no more rationale than “to reflect recent Board requirements (e.g. Ekati and NICO licences)”, Board Staff have proposed material changes in W2015L2-0001 Part J and Schedule 8 that will impact on established and approved AEMP practices. The changes to include an AEMP Evaluation Report and a Response Plan with the specifications proposed in Part J and Schedule 8 for example are material to DDMI and are unwarranted. DDMI’s AEMP design, which includes all aspects of evaluation and response were recently approved; 2014. Any Board requirements were presumably addressed at that time. It is unreasonable to continue to change the requirements for these monitoring plans and cause DDMI to re-invest time and resources with no clear reason or benefit.”

The Board commends DDMI on its progressive effort on its AEMP Response Framework to date. The Board notes that the program may always evolve or change depending on the circumstances – for example, DDMI has requested several changes to the program in the past several years. Furthermore, the AEMP Design is scheduled for a review and update in the near future.

Part J, Item 10, is a standard water licence condition requiring an Aquatic Effects Re-evaluation Report. The purpose of this report is to summarize any project-related environmental effects measured in the AEMP in all the years since project inception. Unlike the Annual AEMP Report, this report provides an opportunity to evaluate any trends over several years and compare measured effects to those that were predicted during the environmental assessment. The requirement for the AEMP Re-evaluation Report to also provide an update to predictions of project-related effects has been added. In their Application, DDMI noted in several cases (e.g., water quality and dust level) where actual levels are exceeding what was predicted in the Environmental Assessment. Considering that the AEMP was designed based on these predictions, the purpose of this new requirement is therefore to evaluate whether changes are necessary to either the AEMP Design or to operational methods/mitigations.

In regards to NSMA's closing argument comment regarding their request to the WLWB *“to ensure that air quality monitoring results are tied to AEMP assessment mechanisms, in whatever forms”*. The Board notes that dust monitoring is a component in the approved AEMP Design. Dust has been highlighted as

concern during this Water Licence proceeding as explained in more detail in Part H (Waste management) above, therefore, the Board has specified it in the requirements for the AEMP Design (as an AEMP component) in Schedule 8, Item 1(c).

The Board believes the requirement for an Aquatic Effects Re-Evaluation Report and Response Plans are necessary in order to have a sufficient understanding of the impacts of the Diavik mine to Lac de Gras and ultimately to protect the Receiving Environment. The Board recognizes DDMI's concern that the requirements for Response Plans may not align perfectly with DDMI's approved Response Framework,⁹⁷ but is aware that the next version of the AEMP Design Plan is forthcoming and during the review of that submission, further clarity through revisions to the Design Plan and/or changes to the schedules can occur.

Part K: Conditions Applying to Closure and Reclamation and Schedule 9

Part K of the Licence pertains to mine site closure and reclamation. The conditions, which are similar to those in other licences, establish a planning process over the life of the project. The Licence conditions applying to the security deposit (Part C of the Licence) are closely tied to Part K; the security deposit is directly related to the activities described in the closure plans, and updates to closure plans often result in updates to the security deposit.

The purpose of this Part is to establish a rigorous closure planning process that begins early, provides ample opportunity for public input, and, over the life of the Project, reduces uncertainties related to post-closure risks. The ultimate goal of this Part is to ensure that the mine will meet the closure goal for mine sites in the NWT: "returning mine sites and affected areas to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities."⁹⁸ In line with the Closure Guidelines, conditions have been added which require a Closure and Reclamation Plan, Annual Closure and Reclamation Plan Progress Report, and Performance Assessment Report.

Part K, Item 1, requires implementation of the Closure and Reclamation Plan (either Interim or Final) and for DDMI to endeavour to carry out progressive reclamation as soon as is reasonably practicable.

Part K, Item 3, requires the Licensee to submit an updated Closure and Reclamation Plan at the Board's request. There are a number of factors that can influence the timing of these submissions, such as security reviews, operational changes, major research results, and upcoming Water Licence renewals. This condition therefore provides the Board with the flexibility to accommodate these or other factors.

⁹⁷ See WLWB (www.wlwb.ca) Online Registry for [Diavik – WL Renewal – Public Hearing – DDMI Closing Arguments – Jul 23 15](#), page 8

⁹⁸ This is the required standard of reclamation, as outlined in AANDC's *Mine Site Reclamation Policy for the Northwest Territories* (2002), and in the MVLWB's *Guidelines for the Closure and Reclamation of Advanced Exploration and Mine Sites in the Northwest Territories* (or the "Closure Guidelines").

Part K, Item 3, requires the Licensee to submit an updated Closure and Reclamation Plan at the Board's request. The Plan must be in accordance with *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories* and Schedule 9, which includes any requirements from the Licence W2007L2-0003 that are not explicitly required by the Guidelines. There are a number of factors that can influence the timing of these submissions, such as security reviews, operational changes, major research results, and upcoming Water Licence renewals. This condition therefore provides the Board with the flexibility to accommodate these or other factors.

The purpose of the Annual Closure and Reclamation Plan Progress Report required under Part K, Item 4 is to keep the Board informed of the company's progress as it relates to planning, research, engagement, and other activities described in the closure plan. This is important since several years can pass between submissions of the closure plan, and the Board must have a means of ensuring that the company is on track. Within a Progress Report, the company may propose changes to the closure plan; these must be approved by the Board before they can be implemented. The Board has been requiring annual progress reports for mines within its jurisdiction for several years, and has found this to be a useful practice that keeps all parties informed, and that can streamline the process of updating and approving ICRPs. The requirements for the Progress Report are in Schedule 9, Item 2, and are largely based on the outline provided to DDMI in the Board's September 26, 2011 directive.

Part K, Items 5 and 6 require a Reclamation Completion Report and a Performance Assessment Report. These requirements will support the process for relinquishing liability, as described in the *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories*.

Part K, Item 7 stipulates that the final closure and reclamation plan must be submitted 3 years prior to the Licence expiry date or two years before end of commercial operations, whichever occurs first. In their comments on the Draft Licence, DDMI noted:

"The clause "... 3 years prior to the expiry date of this License..." has been added without being provided, with supporting rationale, as part of the renewal process and without being subject to review, questioning or consideration of additional evidence. This condition is inconsistent with DDMI's request, provided with rationale, for a term of 15 years and is inconsistent with other Water Licenses including W2012L2-0001 as referenced in Section 4.2 of DDMI's Renewal Submission."

The timeframe established by this condition is meant to enable the Board to approve the Final Closure Plan before the Licence expires or Closure begins, so that the conditions in the next Licence will be informed by the approved Plan. The Board anticipates that both the approval process of the final plan and the Licence renewal process could take roughly a year and half each, which is how the Board arrived at a deadline of three years prior to the expiry date.

Annex 1: Surveillance Network Program (SNP)

The SNP has been annexed to the Licence to detail sampling and monitoring requirements related to compliance with numerous conditions and plans required by the Licence. Requirements for measuring flows, volumes, and meteorological data are based on standard water licence conditions as are the reporting requirements.

In their comments on the Draft Licence, EC, EMAB, and DDMI recommended that the Oil and Grease sampling requirement in the SNP be revised to be for Total Petroleum Hydrocarbons (TPH). As described above, the Licence includes this change.

In order to address Intervener concerns regarding hydrocarbon input into the North Inlet as noted in Part H above, TPH has been added to SNP Stations at the NIWTP Influent (1645-13), PKC Pond Water (1645-16), NIWTP effluent (1645-18/18B). The Draft Licence also included additional organics (including hydrocarbon) sampling at the mixing zone (1645-19), however, in their comments, DDMI was opposed to this addition. The Board believes that given the change from Oil and Grease EQC to TPH EQC, with TPH sampling required at the point of compliance, it is unnecessary to monitor at the mixing zone, therefore, this change is not included in the Licence. Oil and Grease sampling has been retained at the SNP stations relevant to sewage discharge.

Errors in the SNP were noticed during administration of W2007L2-0003 while the renewal proceeding was ongoing. For example, sampling requirements for the Collection Ponds (e.g., 1645-42, 44, 45, 46, 47, 67, 68, 69, 74, 76) do not align with Water Licence conditions. At some of these stations, the SNP currently requires TPH (only) to be sampled “once prior to the commencement of discharge to Lac de Gras”. The Board will consider revisions to the SNP following the Water Licence Renewal.

5.0 Conclusion

Subject to the terms and conditions set out in the Licence, and for the reasons expressed herein, the WLWB is of the opinion that the licensed undertaking for Water use and Waste disposal associated with the Diavik Diamond Project can be completed by the Licensee while providing for the conservation, development, and utilization of Waters in a manner that will provide the optimum benefit for all Canadians and in particular for the residents of Wek'èezhii.

Water Licence W2015L2-0001 contains provisions that the Board feels necessary to ensure and monitor compliance with the *Waters Act* and the Regulations made thereunder and to provide appropriate safeguards in respect of the Applicant's use of water and deposit of Waste.

SIGNATURE

A handwritten signature in black ink, appearing to read "J. Oslon". The signature is written in a cursive style with a long horizontal stroke at the beginning.

Chair, Wek'èezhii Land and Water Board

August 26, 2015

Date