October 13, 2017

Mr. David Wells
P.O. Box 2498, 300-5201, 50th Avenue
Yellowknife, NT X1A 2P8

Dear Mr. Wells,

Re: Version 7.1 of the Waste Rock Management Plan (WRMP)

The Wek’èezhii Land and Water Board (WLWB or the Board) met on September 22, 2017 to consider Version 7.1 of the Waste Rock Management Plan (WRMP or the Plan).

The Board has decided to approve Version 7.1 of the Plan for the reasons outlined in the Reasons for Decision. There were five revisions required that can be incorporated into Version 8 of the Plan, along with any requirements from the Board’s consideration of the proposed updates to the WRMP Schedule (Schedule 6, Condition 5) and the A21 Addendum to Version 7.1 of the WRMP, all of which are currently under consideration by the Board. Furthermore, the Board notes that the Waste Rock Misclassification Report was not considered during review of Version 7.1 of the WRMP and any information relevant to the misclassification aspects must be included in subsequent versions of the Plan, including updates to maps.

Sincerely,

Mason Mantla
Acting Chair, Wek’èezhii Land and Water Board

Copied: Diavik Distribution List
Reasons for Decision

<table>
<thead>
<tr>
<th>Reference/File Number:</th>
<th>W2015L2-0001 (Type “A” Water Licence)</th>
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<tr>
<td>Licensee:</td>
<td>Diavik Diamond Mines (2012) Inc. (DDMI)</td>
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<td>Subject:</td>
<td>Approval of Waste Rock Management Plan (WRMP) Version 7.1</td>
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Decision from the Wek’èezhii Land and Water Board
Meeting of September 22, 2017

1.0 Decision

On September 22, 2017, the Wek’èezhii Land and Water Board (the Board) met to consider a request by Diavik Diamond Mines (2012) Inc. (DDMI) for the approval of Version 7.1 of the Waste Rock Management Plan (WRMP or the Plan) under Water Licence W2015L2-0001. The Board has approved Version 7.1 of the WRMP. DDMI is to work with Board staff to determine a submission date for Version 8.0. The Board requires the following:

1. With regards to Version 8 of the WRMP, DDMI is to incorporate the following revisions:
   
   a. Include reference to the key publications within the applicable sections in the text of the WRMP or provide a condensed list of key publications in Section 5;
   
   b. Include past and predicted tonnages/volumes of waste rock (by source, Type and destination), till by destination, and ore by stockpiling destination;
   
   c. Edit Figure A-3 to include a legend for all representative areas on the figure;
   
   d. Include a definitive time limit for “temporary” waste rock storage along with supporting rationale; and
   
   e. Include a statement indicating that, prior to the use of Type I rock from the CLR basin, DDMI will submit supporting evidence and obtain approval of a revised WRMP.

2. DDMI to submit supporting evidence that the Type I rock from the CLR basin is suitable for construction and/or closure purposes prior to use and obtain approval before use.
2.0 Background
DDMI classifies that their waste rock is based on total sulphur content in order to segregate potentially-acid generating (PAG) waste rock from non-PAG waste rock:

- Type I rock – non-PAG
- Type II rock – intermediate, mixed rock with low acid generating potential
- Type III rock – PAG

Based on the Waste Rock Storage Area Design Report (i.e., 2001 Design Report or the Country Rock and Till Storage Updated Design Report), DDMI planned to segregate the three types of waste rock into five different basins in the North Waste Rock Storage Area (WRSA), promote freezing of the North WRSA, and cover the North WRSA at closure (see Figure 1). Runoff and seepage generated from the North WRSA is designed to be directed to one of three collection ponds.

In November 2015, the Government of the Northwest Territories (GNWT) Inspector reported that DDMI deviated from the 2001 Design Report: placing Type III rock in the SED basin (designated for Type II rock), the CLR basin (designated for Type I rock), the north dam of the PKC Facility, and the A21 dike.

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1 See WLWB Online Registry for N7L2-1645 – Diavik – Country Rock and Till Storage Updated Design Report - Aug 2001 – Aug 21_01
3 See WLWB Online Registry for Review Summary, Figure 4 in Attachment #1 of DDMI Response to Comments
4 See WLWB Online Registry for Diavik – Water Licence Inspection Report – October 26 2015 – Nov 27_15
the January 2016 Inspection Report,⁵ the Inspector informed DDMI that immediate submission of a revised Design Report and Waste Rock Management Plan was necessary and that “DDMI will continue to be out of compliance with their Licence until DDMI is operating in conformance with an approved Waste Rock Management Plan.” On March 31, 2016, DDMI submitted WRMP Version 7 to the Board. DDMI’s Water Licence requires DDMI to submit a WRMP for approval as per Part H, Condition 7 and Schedule 6, Condition 5 of the W2015L2-0001 Water Licence.

The Board did not approve WRMP Version 7, and required DDMI to submit WRMP Version 7.1 by November 16, 2016 with several revisions.⁶ The Board also determined that the Water Licence Schedules would benefit from an amendment related to the WRMP and required DDMI to “identify each Schedule requirement that is problematic, explain why it is problematic and propose updates to the Schedule”.

The Board received Version 7.1 of the WRMP from DDMI on November 16, 2016. On November 30, 2016, DDMI identified an error in Figure A-3 of Appendix A of the WRMP Version 7.1 and submitted a revised Figure.⁷ On December 16, 2016, the Board received proposed updates from DDMI to Schedule 6, Condition 5 (WRMP), as well as Schedule 1 (Annual Report) and Schedule 6, Condition 6 (Seepage Survey Report), because it was identified by DDMI that these may be impacted by the Board’s decision on the proposed changes to Schedule 6, Condition 5.⁸ Board staff also submitted suggestions for Schedule 6, Conditions 5 with the Item for Review.⁹ The Schedule updates are still under consideration by the Board.

Board staff distributed the Item for Review on May 30, 2017 with reviewer comments due June 29, 2017 and responses due July 12, 2017. Comments were received from the GNWT-Inspector, and the GNWT Department of Environment and Natural Resources (GNWT-ENR). Board staff also submitted comments. Environment and Climate Change Canada (ECCC) acknowledged the submission, but provided no comments. Proponent responses were received by the deadline of July 12, 2017. Reviewer comments and recommendations, as well as Proponent responses are available on the Board’s online registry.¹⁰

### 3.0 Reasons for Decision

The Board is of the opinion that WRMP Version 7.1, with a few exceptions, adequately addresses the requirements in Schedule 6 and the Board’s September 15, 2016 directive. Some requirements could be better addressed, as discussed below; however, none of these are urgent and can be addressed in the

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7 See WLWB Online Registry for Diavik – Waste Rock Management Plan – Version 7.1 – Erratum - Figure A-3 – Nov 30_16
8 See WLWB Online Registry for Diavik – Waste Rock Management Plan – Version 7 – Schedule Update Request – Schedule 6 Item 5 – Dec 16_16
9 See WLWB Online Registry for Diavik – Waste Rock Management Plan – Version 7 – Board Staff’s Suggested Updates to Schedule 6 – May 2_17
next version of the WRMP. The Board notes that DDMI recently submitted an addendum to the WRMP Version 7.1, related to upcoming mining-related activity at the A21 open pit.\textsuperscript{11} The Board anticipates that a resubmission of the WRMP may be required following the Board’s consideration of A21 activities and the Schedule updates in order to ensure the DDMI has a WRMP that includes waste rock management practices for all mining-related activity at the Diavik site and conforms to the updated Schedule. This will be a good opportunity for DDMI to address the remaining outstanding issues.

As described previously, the Board did not approve Version 7 of the WRMP. As noted above, the Inspector has informed DDMI that they will continue to be out of compliance with their Licence until DDMI is operating in conformance with an approved Waste Rock Management Plan. With approval of Version 7.1, the Inspector will now have an approved Plan to assist with inspections, put the company back into compliance, and provide DDMI with greater certainty that its waste rock management practices are acceptable to the Board.

\textit{The Board approves Version 7.1 of the Waste Rock Management Plan.}

The sections below describe the revisions that should be included in Version 8 of the WRMP, and the reasons for each required revision. These sections are organized by the required revisions (Items 1 through 10) from Table 1 in the RFD for Version 7 of the WRMP. Requirements that the Board believe were met are straightforward and are not discussed below.

1.1 Attachment 2: Table 1, Item 6

Under Item 6 in Table 1 from the RFD for Version 7 of the WRMP,\textsuperscript{12} DDMI was required to “[e]nsure that references to geochemistry and test pile research findings are current”. The rationale for this was that “[r]eaders of this Plan should have the ability to review current information”. To satisfy this requirement in Version 7.1, DDMI included Appendix B which lists “Publications Resulting from Test Pile Research”.

Section 5 of the Plan includes several results/interpretations reported to date. Section 5 also makes reference to Appendix B, which is a long list of research documents. However, individual references are not cited next to the results/interpretation within the text in Section 5. This makes it difficult to identify which of the many research papers provide key information, and makes future reviews by reviewers cumbersome. In the review, DDMI was asked if they could “provide the references to the specific studies that led to each result/interpretation identified in Section 5 of the WRMP” (Board staff comment 1). DDMI responded that “waste rock pile behaviour has many interactive components and it is therefore difficult to identify specific references that led to each result/interpretation”. The Board is of the opinion that references should be listed next to the results so that readers of the Plan have the ability to review the key information from the source document.

\textsuperscript{11} See WLWB Online Registry for Diavik - WRMP Version 7.1 - A21 Addendum - Jul 31_17.pdf
### #1a. The Board directs DDMI to include as part of Version 8 of the WRMP reference to key publications within the applicable sections in the text.

#### 1.2 Attachment 2: Table 1, Item 7

DDMI was required to “[a]dd waste rock destinations, till quantities (if any), and ore storage amounts to Tables 4, 5, and 6” under Item 7 in Table 1 from the RFD for Version 7 of the WRMP. The rationale for including this was that “the information will provide a clearer picture of waste rock destinations”. The Board also stated in the RFD that this revision ensures that “the Plan conforms to the Licence and provides enough information for the reader to understand DDMI’s waste rock management practices”. While DDMI did add columns to each of the Tables to indicate “Target Destinations” by waste rock type, Tables 4 and 5 were not broken down by destination and Tables 4 and 6 were not broken down by source. Most of the Target Destinations were lumped together by year in the tables. Providing past and predicted tonnage by destination provides context for the reader and is important from a closure perspective.

### #1b. The Board requires DDMI to include as part of Version 8 of the WRMP past and predicted tonnages/volumes of waste rock (by source, Type and destination), till by destination, and ore by stockpiling destination.

In the Schedule updates provided during review of Version 7.1, DDMI stated that “management plans are not an appropriate document for reporting results”. DDMI proposed that quantity updates would be better suited to the Annual Water Licence Report instead of the WRMP. As mentioned above, the Schedule updates are still under consideration by the Board, therefore more guidance will be provided at a later time.

#### 1.3 Attachment 2: Table 1, Item 9

Item 9 in Table 1 of the RFD for Version 7 of the WRMP required that DDMI “include a complete description of where DDMI placed each type of material, and, perhaps most importantly, a new figure that clearly shows where each Type of material (till, Type I, Type II-only, and Type III rock) has been placed in the WRSA”. The Board also stated that the “WRMP should have an accurate and easily understood description of how the WRSA was built”. In Version 7.1, DDMI added additional wording to Section 3.3 around changes from the design. DDMI also added Table 7, which describes the original plan and current conditions, as well as Figure A-3 in Appendix A, which shows where the different rock types are stored in the WRSA. There were no comments from any reviewers on DDMI’s revisions and the Board believes that DDMI has satisfied the requirement to include this information.

Figure A-3 in Appendix A was not completely labeled (i.e. the legend did not reference the brown colored area in the northwest corner of the figure; it appears as though the brown area represents till.

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14 Ibid
15 Ibid
storage as it is labeled as “TILL” on Figures 2 and 3, but this information should be provided in the legend).

**#1c. The Board requires DDMI to edit Figure A-3, as part of Version 8 of the WRMP, to include a legend for all representative areas on the figure.**

The Board also recommends that this figure be located within the text of the WRMP (e.g., after Figure 2) to assist the reader.

In the public review, the GNWT-Lands Inspector commented that Table 8 (Location and status of Type III waste rock on site), Figure 3 (Temporary stockpiles of Type I waste rock and Type III waste rock), and Figure 4 (Locations of Type II-III waste rock storage on site) in the Plan were “partly inaccurate” in light of the misclassification of waste rock (GNWT-Lands Inspector comments 9 and 10). The Inspector recommended that the next version of the WRMP “should include a review of aspects which we know at this time are inaccurate”. DDMI responded that Version 7.1 may be revised based on the relevant information and conclusions from the misclassification investigation. The Board agrees that any information relevant to the misclassification aspects must be included in subsequent versions of the Plan, including updates to maps; if there are implications for the WRMP, then DDMI must update the Plan accordingly. To be clear, during the review of the WRMP Version 7.1, the Board did not take into account any of the information presented in the Waste Rock Misclassification Report and thus, at this time, no decisions have been made regarding this aspect.

### 1.4 Attachment 2: Table 1, Item 11

In Version 7 of the WRMP, DDMI removed reference to a 2-week maximum temporary storage time of waste rock that was in Version 6 of the WRMP. Under Item 11 from Table 1 in the RFD, DDMI was required to add the following text to Section 3.4, or provide a rationale for why it was removed:

The duration that waste rock is temporarily stored in these areas depends on: the quantity of material being mined and hauled to surface; the ratio of rock types being brought to surface; and the availability of surface haul trucks and loaders.

To minimize the amount of time waste rock is stored at temporary storage locations DDMI established a 2-week maximum storage time at the temporary storage locations. In the event mining operations are suspended (e.g. a shutdown), material in the temporary storage areas will be removed to appropriate locations in the NCRP or construction areas.

Section 3.4 in the Plan describes the areas where waste rock is stored temporarily. Figure 3 in the Plan shows the temporary stockpiles of Type I waste rock (outside the WRSA) and Type III waste rock (within the CLR cell of the WRSA). In the conformance table in Version 7.1, DDMI stated that “the sentence regarding a 2 week storage time for waste rock storage at the underground portals was removed, as

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movement of this waste material is determined by ore transport requirements for the Process Plant”. During the public review, DDMI was asked to elaborate on their explanation “so the Board can understand why DDMI has proposed to remove the text, and in particular the 2-week maximum storage time” (Board staff comment 6). DDMI responded with the following:

In practice, and in order to maintain operational efficiencies, a minimum volume of waste/ore must be present on the portal pad prior to dedicating surface equipment for waste/ore movement from the portal pad. The underground mine plan changes in response to the items identified in response to WLWB-9 and may result in meeting minimum volumes in a timely manner, or there could be a delay in waste rock being hauled to a specific portal. Should there be a delay, this may result in insufficient waste rock volumes and a temporary storage time greater than two weeks. Currently the underground mine is the bottleneck at Diavik (i.e. there is surplus volume in the processing plant) and hence surface resources are used to transport ore to the process plant first and move waste rock second.

The GNWT-Lands Inspector recommended to “[r]etain the requirement to set some sort of limit on the maximum storage time at temporary storage locations” (GNWT-Lands Inspector comment 11). The Inspector also stated that “some sort of storage time requirement would seem prudent in order to minimize inspection challenges differentiating between erroneous long term storage of waste rock vs. "temporary" storage for Process Plant purposes”. The Board supports the Inspector’s recommendation that a time limit is necessary. The time limit does not need to be the same as what was previously stipulated in Version 6 (i.e., 2 weeks) but should be more definitive than what DDMI currently has proposed (i.e., DDMI stated during the Item for Review of Version 7 of the WRMP that DDMI’s defining of “temporary” means that waste rock “will be used or moved before/at closure”17).

#1d. The Board requires DDMI include as part of Version 8 of the WRMP a definitive time limit for “temporary” waste rock storage along with along with supporting rationale.

1.5 Attachment 2: Table 1, Item 14

Item 14 in Table 1 of the RFD18 required DDMI “add a statement that the company will not use the Type I rock underlying the Type III rock in the CLR basin unless testing confirms the material is suitable for use”. In Version 7.1, DDMI added the statement that “Type I material will not be used in construction or closure unless it has been specifically tested to confirm geochemical suitability”. This topic was raised during the public review of WRMP Version 7.1 where it was noted that “[t]he Board nor DDMI has outlined a process for approval of use of this material” (Board staff comment 5). Board staff requested DDMI “[c]omment on whether it would be appropriate to add a sentence stating ‘Prior to using this material, DDMI will submit supporting evidence and obtain approval of a revised WRMP’”. DDMI

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responded that they had no objection to this addition. The Board thinks that this requirement should be effective immediately, but should also be reflected within an update to Version 8 of the WRMP.

1.6 Additional Comment

GNWT-ENR recommended that the WRMP “should be updated at the earlier of at least six months prior to construction of the [south WRSA] or six months prior to it being removed and placed as a cover for the NCRP” (GNWT-ENR comment 1). DDMI responded that they would “be submitting an addendum to the Waste Rock Management Plan to address the requirements for A21 and [the south WRSA] construction”. As noted in Section 4.0 above, DDMI submitted an addendum to Version 7.1 of the WRMP on July 31, 2017, which is currently under Board consideration.

Signed the 13th day of October, 2017, on behalf of the Wek’èezhii Land and Water Board

Witness

Mason Mantla
Acting Chair, Wek’èezhii Land and Water Board