Subject: Information Request – Closure Cost Estimate for Rock Cover

Dear Mr. Fequet,

Diavik Diamond Mines (2012) Inc. (DDMI) is pleased to provide the attached response to the Information Request (IR) sent from the Wek’éezhii Land and Water Board (WLWB or the Board) on January 12, 2017. As requested by the Board, DDMI has also included our comments on the Government of the Northwest Territories (GNWT) IR response, submitted on February 17, 2017.

In general, the process for developing closure and reclamation cost estimates appears to require a more structured approach. The LWB’s “Guidelines for Closure and Reclamation Cost Estimates for Mines” (the Guidelines), distributed as a draft in December 2014, lack security estimating standards and have yet to be finalized. Without such standards in place, it is difficult for licensee’s to prepare security estimates and difficult for reviewers to evaluate or accept submissions. This uncertainty results in further inefficiencies from a process and resourcing perspective for all parties. DDMI currently relies on the Water License and the more general approach to developing cost estimates, as provided in Appendix 1 of the Guidelines.

DDMI’s Water License (W2015L2-0001, Part C Item 2) states that DDMI is to provide a “... liability estimate utilizing the current version of RECLAIM or another method acceptable to the Board”. To date, unit rates for the Diavik mine have been based on the most current version of the RECLAIM model (Version 7), as recommended by the GNWT Environment and Natural Resources (ENR 2014) and approved by the WLWB (WLWB 2014). It is DDMI’s understanding that RECLAIM unit costs have not been updated, nor has a new version of RECLAIM been issued.

Appendix 1 of the Guidelines states that development of a unit cost that is not in RECLAIM should provide: an explanation of why the unit cost in RECLAIM does not apply and a re-estimate of the unit cost, with all supporting calculations and documentation. It further states that “when both of these requirements are met, the Board will consider whether the alternative unit cost is appropriate.” In relation to the revised unit costs proposed by the GNWT, DDMI is not aware if the full requested information has been provided nor are we aware that the Board approved the alternate unit cost for application beyond DDEC.

In addition to the security estimate for the Type III rock in the CLR Basin, which is the specific basis for this IR, the WLWB also requires revised closure cost estimates in support of the NCRP-WRSA Final Closure Plan and the site-wide Closure and Reclamation Plan Version 4.0 (CRP V4). As such, DDMI is requesting confirmation from the WLWB with regard to Part C Items 2 and 3 of W2015L2-0001:

2. Upon request of the Board, the Licensee shall submit an updated mine Reclamation liability estimate utilizing the current version of RECLAIM or another method acceptable to the Board.
3. The amount of the security deposit required by Part C, Item 1 and Schedule 2 may be revised by
the Board based on estimates of the mine Reclamation liability referred to in Part C, Item 2 of this
Licence or based on such other information as may become available to the Board.

Specifically, DDMI is requesting confirmation that:

- RECLAIM V7, as approved by the WLWB in 2014, is the most current version of RECLAIM
  (as per Part C Item 2);
- use of current approved RECLAIM unit rates continues to be acceptable to the Board for
  use in providing reclamation liability estimates; and
- there is no “other information” that has become available to the Board which DDMI must
  include in the revised cost estimates.

In light of the uncertainties noted above and in the attached, and in an effort to reduce the number
of revisions required to the estimates, DDMI would appreciate a timely confirmation of the above
matters.

Yours sincerely

Gord Macdonald

cc/ Anneli Jokela
DDMI response to WLWB IR January 12, 2017

1. Use of DDEC Site-Specific Unit Costs

DDMI explained in their response to GNWT-ENR’s recommendation that “site-specific unit costs derived for one operation may not be directly applicable to another.” Please provide further rationale for why and how DDEC’s site specific unit costs do or do not reasonably reflect the site conditions at Diavik. For additional information on the derivation of DDEC’s site specific unit costs, please see the Board’s June 15, 2016 directive to DDEC, pages 4 and 5.

DDMI Response

The requirement specified in W2015L2-0001 Part C Item 2 is for DDMI to provide a “... liability estimate utilizing the current version of RECLAIM or another method acceptable to the Board”. As previously noted in DDMI’s response to the GNWT-ENR’s recommendation (30 November 2016), DDMI unit rates are based on the most current version of the RECLAIM model (Version 7), as recommended by ENR (ENR 2014) and approved by the WLWB (WLWB 2014) for the Diavik mine. These rates are consistent across activities at the Diavik mine site and comply with the requirements of W2015L2-0001 Part C Item 2.

In an effort to clarify the process for revising RECLAIM unit costs, DDMI previously requested additional information from the GNWT and was provided with the responses included in DDMI 2014. From this letter, DDMI understands that RECLAIM unit costs are based on broad input that undergoes multiple rounds of review prior to approving, updating and issuing a new version of RECLAIM. DDMI understands that RECLAIM V7 is most current and that no updates have been made to incorporate any new information from DDEC regarding site-specific unit rates.

DDMI recognizes the option within RECLAIM to propose site-specific unit rates. To date, DDMI has not proposed site-specific rates and has consistently utilized the RECLAIM unit rates as recommended by ENR (or previously AANDC) and approved by the WLWB (or previously MVLWB, NWT Water Board). It is DDMI’s understanding that use of RECLAIM unit rates continues to be acceptable to the Board for providing reclamation liability estimates.

It would be inappropriate for external parties such as DDMI or the WLWB to comment or compare commercially sensitive information used to derive site-specific unit rates for one mine operation with another. ENR clearly recognizes the sensitivity of unit rates as they view the information used to establish RECLAIM unit rates as being “confidential” and therefore not open to review. The Guidelines also recognize that:

“The unit costs in RECLAIM are independent third party costs that have been obtained from a review of northern reclamation projects conducted by third party contractors. Unit costs are undocumented to protect pricing/bidding.”

Appendix 1 of the Guidelines provides the following guidance around site-specific unit rates:
“Proponents wishing to develop a unit cost that is not in RECLAIM should provide:

a. An explanation of why the unit cost in RECLAIM does not apply, and
b. A re-estimate of the unit cost, with all supporting calculations and documentation.

When both of these requirements are met, the Board will consider whether the alternative unit cost is appropriate.”

DDMI has not been made aware that the specific information described in a) and b) above has been provided in relation to the proposed site-specific costs derived for DDEC. Without such information, it would be inappropriate to consider applying these costs for use at other mine sites.

2. Re-sloping cost

The GNWT has proposed updating the re-sloping unit cost labelled “DSL” (doze overburden/soil piles, low) from $0.95/m³ to $1.05/m³ and DDMI has objected. RECLAIM Version 7 provides a range of $0.95/m³ to $3.80/m³, with a comment that the high end of the range is for pushing materials up to 300 meters. Please discuss the distances materials will be pushed and state, in DDMI’s view, the appropriate value between $0.95/m³ to $3.80/m³ with rationale.

DDMI Response

The rate of $0.95/m³ is the rate previously recommended by GNWT for RECLAIM 7 and approved by the WLWB for the Diavik site. The unit rate of 0.95/m³ was originally recommended by ENR for resloping of the NCRP, where previous maximum slope lengths were in the order of 200m. The GNWT has currently proposed an increase to the re-sloping unit rate for the small Type III pile in the CLR, however slope lengths here are only 60-80 m. Additionally, the final design for the NCRP now incorporates an intermediate road which reduces the maximum slope length to approximately 100 m (see for example Section B of NCRP Final Design Drawing #005). New information available regarding smaller push lengths for materials supports a lower rather than higher unit rate. DDMI has not requested such a reduction. The WLWB approved rate of $0.95/m³ remains the most appropriate rate within the unit cost range outlined in RECLAIM V7.

3. Unit Costs for the Cover

The unit costs in DDMI’s approved RECLAIM estimate for constructing the cover are described in the table below.
The unit cost for SB3S ($4.20/m³) in DDMI’s RECLAIM estimate is lower than the bottom end of the range in RECLAIM 7. DDMI’s approved RECLAIM estimate (see the Unit Cost sheet) indicates that DDMI derived this unit cost by adjusting the previous unit cost ($3.96/m³) for inflation when it updated the estimate to RECLAIM 7. Since the GNWT has now proposed an alternate unit cost for this activity, DDMI should provide a rationale for why $4.20 is still the appropriate unit cost for the “Cover Rock Pile with Type I Rock” activity. If possible, DDMI should provide any documentation or calculations to support this unit cost.

DDMI Response

The GNWT advised that the SB3S rate increased from $3.96 to the recommended value of $4.20/m³ in RECLAIM V7 to account for inflation. The unit cost of $4.20/m³ was approved by the WLWB and was then utilized by DDMI. DDMI understands that RECLAIM V7 is the most current version and that there have been no further unit rate updates to RECLAIM. As such the approved unit rate of $4.20 is the most appropriate.

Excavation is included within the RECLAIM unit rate SB3 as noted by WLWB above. The GNWT do not appear to be proposing a change to this rate; rather, they appear to be adding new closure work scopes (ripping or drill/blast). There appears to be little evidence to support this change in scope from the activities already approved by the WLWB. The GNWT reviewed the required closure work scopes as recently as 2014 and the WLWB has approved these. The approved activities did not include additional ripping or drill/blast and DDMI is not aware of any new information, not available in 2014, that has been presented to support this proposed change in activities. It is DDMI’s understanding that these types of changes to approved closure activities must be supported by new information.

4. Other Areas of the Site

During the review of the RECLAIM estimate submitted with DDMI’s Version 1.1 of the 2015 Annual Closure and Reclamation Progress Report, GNWT recommended that DDMI provide an updated security estimate for the WRSA and the PKC Facility using the same method to calculate DDEC’s rock cover unit

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Code in DDMI’s Approved RECLAIM</th>
<th>Cost Code Details RECLAIM 7</th>
<th>Unit Cost in DDMI’s Approved RECLAIM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover Rock Pile with Till</td>
<td>SB3L</td>
<td>This unit cost is described in RECLAIM Version 7 as “SB1 plus spread and compact” and has a range of $5.10/m³ to $8.90/m³. Unit cost code SB1 is “excavate/load/short haul; Low: non-engineered; High: engineered”. In other words, the SB3 code includes excavation, loading, hauling, spreading, and compacting.</td>
<td>$5.10/m³</td>
</tr>
<tr>
<td>Cover Rock Pile with Type I Rock</td>
<td>SB3S</td>
<td>Same as above for SB3L.</td>
<td>$4.20/m³</td>
</tr>
</tbody>
</table>
costs. Please comment on whether DDMI believes that the unit cost code changes for the CLR basin also apply to the rest of the WRSA and PKC Facility. If so, please provide an opinion on whether the Board should adjust the closure cost estimate to reflect these changes now or with the RECLAIM update for ICRP Version 4.

DDMI Response

The method used to calculate DDEC’s rock cover costs was based on site-specific unit rates rather than RECLAIM V7 unit rates. DDMI appreciates that a proponent has the option of proposing site-specific unit rates as noted in Appendix 1 of the Guidelines and included in DDMI’s response to Question 1 above.

DDMI has not proposed site-specific unit costs but has applied unit rates as provided in RECLAIM V7, as recommended by ENR and approved by the WLWB. DDMI will continue to use these approved rates in the updates for the NCRP-WRSA and PKC Facility for the same reasons provided in response to Question 1 above.

5. DDMI Response to GNWT Submission of February 17, 2017

DDMI has reviewed the GNWT’s submission of February 17, 2017, provided in response to an IR issued by the Board on 12 January 2017. DDMI provides the following comments for the Board’s consideration.

IR1a

In their letter, the GNWT notes that RECLAIM unit costs are based on third party costs; however, the referenced unit costs are DDEC’s, rather than those provided by a third party. While the GNWT does not appear to be suggesting that the unit rates in RECLAIM V7 be revised based on the information provided from DDEC, they do not explicitly state this.

Page 1 of the BCL memo notes that, “appropriate unit costs for cover has been a topic of considerable attention during reviews of security estimates for Ekati, Diavik and other mines for many years”. In 2014, the GNWT confirmed the unit rate from the range recommended in RECLAIM 7 and adjusted these for inflation. The specifics of how the rates of $4.20 and $5.10/m³ for rock/till were selected were not provided previously, but site conditions that could possibly impact this unit rate were well known.

It is DDMI’s opinion that the GNWT response does not provide sufficient justification to support a change in unit rates. While the GNWT seems to indicate that it is DDMI’s responsibility to determine why the DDEC unit rates are not appropriate, DDMI feels that the GNWT also has a responsibility to demonstrate why the previous rates recommended by the GNWT, which were substantially reviewed and approved by the WLWB, are no longer valid.

Lastly, it appears that unit rates for DDEC’s Security Estimate decreased from 2013 to 2016 for the activity “drilling and blasting of previously mined waste rock” and it is not clear why a decrease in unit rates at DDEC has resulted in an increase in unit costs at Diavik.
The GNWT’s view that the most recent unit costs should always be used and that updates to unit costs could be annual, fails to acknowledge the requirement that updates to unit costs should first be reflected in a re-issued version of RECLAIM, and that the process to support the development of RECLAIM costs should be inclusive and rigorous.

DDMI recognizes that Part C Item 3 of W2015L2-0001 allows the Board to revise the security estimate based on “other information as may become available to the Board” as well as estimates utilizing the current version of RECLAIM:

3. The amount of the security deposit required by Part C, Item 1 and Schedule 2 may be revised by the Board based on estimates of the mine Reclamation liability referred to in Part C, Item 2 of this Licence or based on such other information as may become available to the Board.

DDMI respectfully requests that the Board identify if other information is being considered by the Board to revise the security deposit, possibly without updating RECLAIM. If so, DDMI also requests that the information and rationale for its consideration be made available to DDMI and reviewers for comment. It would be beneficial for all parties to ensure that a fair review and approval process is incorporated into revisions that may not be associated with RECLAIM.

The GNWT recommended the DSL rate of $0.95/m³ as recently as 2014, and this rate was also approved by the WLWB. The GNWT note a preference to change the DRL to $1.05/m³ but the rationale to support this proposed change is lacking. For example, is there new information that was not available in 2014 to support this change? An explanation as to why the use of DSL was more appropriate in 2014 versus the use of DRL in 2016 was not provided. DDMI suggests that more detailed information and supporting rationale should be provided and reviewed prior to considering any changes to approved unit rates.

The SB3L rate of $5.10/m³ (till) and SB3S rate of $4.20/m³ (rock) were recommended by the GNWT and approved by the WLWB and are understood to be inclusive of excavate/load/haul/spread/compact, as described by the WLWB. The GNWT does not appear to be questioning or recommending revisions to these unit rates. Rather, they are recommending adding new activities of either ripping (additional $1.05/m³) or drill/blast frozen rock (additional $3.30/m³). However, neither of these rates is included in RECLAIM V7. The GNWT nor BCL provide new evidence as to why these activities are now required when they were not required in 2014, or in any previous GNWT RECLAIM estimates.

DDMI also notes that the comments in the currently approved RECLAIM estimate “Unit Rate Tab”, which we understand were entered by the GNWT, state “specified 2011 $3.96 adjusted for inflation” beside the value of “$4.20/m³”.

IR1b

IR2

IR3
Overall, the GNWT does not appear to address the specific question asked by the WLWB regarding appropriate unit rates based on RECLAIM V7.

IR4

DDMI understands the WLWB question to be in regard to timing of a revised estimate for the PKC Facility and NCRP-WRSA closure cost estimates, and if changes should be considered now or with the RECLAIM estimate for CRP V4. The GNWT response does not mention CRP V4 but seems to suggest the option of following approval of the Final North Country Rock Pile (NCRP)-WRSA Closure Plan.