



July 09, 2021

Mr. Ryan Fequet  
Executive Director  
Wek'èezhii Land and Water Board  
1-4905 48<sup>th</sup> STREET  
YELLOWKNIFE NT X1A 3S3

Dear Mr. Fequet:

**Information Requests - Reclamation Security for Diavik - Winter Roads and Temporary Mineral Stockpiles - W2015L2-0001**

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The Government of the Northwest Territories (GNWT) has received and reviewed the June 18, 2021 information request (IR) requested by the Wek'èezhii Land and Water Board (the Board) concerning the Interim Closure and Reclamation Plan (CRP) Version V4.1 and adjustment to the reclamation security amount submitted by Diavik Diamond Mines (2012) Inc. (DDMI) for Water Licence W2015L2-0001. The GNWT responds to the IR directed to it as follows:

**IR #1:**

**Explain and provide rationale if the security estimate for the Diavik Diamond Mine should include a cost for the construction and operation of the Tibbitt to Contwoyto Winter Road for each of the following time frames:**

- a. During closure (2026 to 2030) to facilitate execution of the closure activities;**
- b. During the short-term post-closure phase (2031 to 2050) to complete maintenance and repair; and**
- c. In the long-term post-closure phase (beyond 2051) to complete maintenance and repair that may be caused by climate change.**

The GNWT acknowledges that the Tibbitt to Contwoyto Winter Road (TCWR) will be critical in the closure and reclamation of the Diavik Diamond Mine. The TCWR is required for land access to the mine site and will support the removal of equipment, materials, wastes, and mobilization and demobilization of reclamation equipment and materials.

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The annual construction and operation of the TCWR is undertaken by a Joint Venture (JV) consisting of Rio Tinto, Arctic Canadian Diamond Company and De Beers. Its purpose is to provide land access to resupply the mines located along its 400 km route. The JV was initially set up in 2000 for the Ekati and Diavik diamond mines, with De Beers becoming a 3<sup>rd</sup> partner in 2008 to support the Snap Lake Diamond Mine. Snap Lake closed in 2015; however, De Beers remains a partner as the Gahcho Kue Diamond Mine is now in operation. The GNWT fully expects that the JV would remain in place until such time as one of the above operations is completely remediated and the need for the road for that mine site is no longer required. Given that Diavik Diamond Mine is anticipated to be closed (actively remediated) prior to the Ekati or Gahcho Kue mines, the estimate is based on the expectation that the winter road would be in place.

The RECLAIM cost estimates for all NWT diamond mines, include both a winter road tariff cost as well as mobilization/demobilization costs. The mobilization/demobilization worksheet presents costs for moving equipment and fuel to the site and removing select equipment, site infrastructure/materials and waste that cannot be disposed onsite. The movement of reclamation personnel and support staff during remediation and post-closure is by aircraft.

All provisions in the RECLAIM cost estimate are for the primary reclamation work and for post-closure activities as outlined in closure plans and supporting documents (i.e. the closure and reclamation plan). A critical component of any closure plan is to ensure the closure design is sufficiently robust to avoid significant long-term site maintenance (i.e. to avoid significant expenditures for roads, equipment, and specialized personnel). However, it is acknowledged that some degree of ongoing and long-term monitoring and maintenance is expected for all closed mines. We note that access for monitoring and generic maintenance activities is also assumed to be provided by aircraft in the RECLAIM cost estimate.

When the GNWT conducts a review of a closure plan, concerns with the performance and/or durability of closure measures are considered by the GNWT. If these concerns are significant, such that long-term maintenance is probable, then the closure plan is deemed insufficient and recommendations are made to improve the plan to the degree that long-term maintenance is not expected to be significant or is not expected to be reasonably probable. It is the GNWT's opinion that the proper place to address potential requirements for long-term maintenance activities that require more significant resources is in the closure design and not in post-closure maintenance plans and requirements.

The GNWT acknowledges that this Information Request has raised another consideration when it comes to future RECLAIM cost estimates for JV mines. That is, the last JV mine to close would likely assume the full construction and operation costs for the TCWR.

For example, the recent security determination for the Diavik Diamond Mine includes:

- A winter road tariff of \$0.1921 per loaded tonne per km for the use of the TCWR. If Diavik were the last mine to closure, then a much higher cost for the winter road would be required.

Based on the GNWT's current understanding of the timelines of the existing JV mines and their expansion potential, it seems unlikely that Diavik will be the last mine in operation. However, a study of the current mine plans could assist in addressing future risks and exposures. However, the complexity and uncertainty associated with mine plans (e.g. market prices, cost for extraction, etc.) would mean that such a study may not be appropriate at this point in time. As time progresses and the mines begin to close, more realistic estimates of closure timing and remediation schedules will emerge that would provide a more defensible position for which operation would bear the largest brunt of these costs. At this time, it is the GNWT's opinion that it is premature to speculate which operation will be the last mine to utilize the TCWR.

The GNWT notes that the Board has also raised the question of possible changes to the cost of the winter road due to climate warming. Conceivably, there could be changes such as a shorter seasons of operation. However, the GNWT could only speculate as to what extent these changes would impact the costs of the winter road. As such, the GNWT has not considered increasing costs (or tariffs) for the winter road at this time. Consideration of these impacts and costs could be included in future estimates of exposure and liability for Diavik and the other mines.

In summary, we do not believe that the costs to construct and operate the winter road should be included in the Diavik RECLAIM cost estimate. The GNWT continues to review mine plans, closure and reclamation plans, reclamation schedules, and assess uncertainties associated with closure to better assess the risk of long-term monitoring and maintenance. Given the high degree of uncertainty associated with mine plans, reclamation timing and closure plans at this time, it is premature to speculate which other operation will be the last JV mine in operation.

**IR #2:**

**Explain if the security estimate should include the cost to reclaim the temporary ore stockpile for the Diavik Diamond Mine. Additionally, provide guidance regarding the need to include the cost to reclaim other temporary stockpiles (e.g., waste rock, tailings/processed kimberlite) should this situation arise for other mines in the NWT.**

The GNWT agrees with the description provided in the IR; that the temporary ore stockpile only exists as a liability for an unplanned closure and not before the End-of-Mine (EOM) timeframe. The GNWT has and plans to continue to estimate security for the EOM liability scenario at the Diavik mine. Security for Diavik mine is not staged like it has been for other mines in the NWT and the GNWT is not proposing that it should be at this point in time. It is important to note that the GNWT's technical consultant's (BCL) assessment of the ore stockpile at the Diavik mine suggest that it should not be considered a low-grade stockpile.

The 120,000-tonne ore stockpile at Diavik represents about 19 days of mill operation. As such, it can be considered in the same light as a surge pile. It is the opinion of BCL that this ore stockpile is likely to be used in the event there is variability in production and that could assist with grade control. Ultimately, it is fully expected to be processed prior to the end of operations and does not seem likely that it would not be processed except in some highly unusual situations.

In the event that it was not processed, it is the GNWT's position that the material could be used for remediation. The GNWT would expect that the material would be geochemically similar to existing tailings in the Processed Kimberlite Containment (PKC) facility. Thus, the stockpile material could be readily used in the closure of PKC, particularly as part of the lower layers of the PKC cover. If used in this way, there would be essentially no incremental cost for this modification to the closure plan.

In summary, the GNWT does not recommend including reclamation costs for temporary ore stockpile for EOM security estimate for the Diavik Mine. For other sites, it may be more reasonable to consider stockpiles in liability estimates, particularly if it is low-grade and the security is already sequenced for different stages of operation (not just an EOM estimate). The site-specific nature of these piles and the particulars on how security is to be posted (i.e. sequenced) for other mine site would need to be considered prior to making such a determination.

Thank you for reaching out with the information request. I recommend that in the future, questions about security estimation and liabilities assessments should be directed to Mr. Nathen Richea, Director, Water Management and Monitoring Division, Department of Environment and Natural Resources, at [Nathen.Richea@gov.nt.ca](mailto:Nathen.Richea@gov.nt.ca), and Ms. Lorraine Seale, Director, Securities and Project Assessment Division, Department of Lands, at [Lorraine.Seale@gov.nt.ca](mailto:Lorraine.Seale@gov.nt.ca).

Sincerely,

A handwritten signature in black ink, appearing to be 'John MacDonald', written over a light grey rectangular background.

John MacDonald  
Assistant Deputy Minister  
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