

Angela Love

From: Prather, Colleen <Colleen.Prather@debeersgroup.com>
Sent: September-03-19 9:54 PM
To: Bill Pain
Cc: Rick Walbourne; Lara Fletcher (lara.f@telus.net); McLean, Sarah; Peters, Michelle; Whitaker, Sean; Angela Love
Subject: RE: Follow up from meeting - Snap Lake Memo
Attachments: Pain_Prather-SnapLake-SecurityMemo_2019-09-03.pdf

Hi Bill

In follow up to our discussions on August 26, please find attached a memorandum providing the clarifying information to the outstanding questions

Please let me know if you have any questions with the attached

Regards, Colleen

From: Bill Pain <Bill_Pain@gov.nt.ca>
Sent: Friday, August 30, 2019 1:45 PM
To: Prather, Colleen <Colleen.Prather@debeersgroup.com>; McLean, Sarah <Sarah.McLean@debeersgroup.com>
Cc: Rick Walbourne <Rick_Walbourne@gov.nt.ca>; Lara Fletcher (lara.f@telus.net) <lara.f@telus.net>
Subject: Follow up from meeting - Snap Lake Memo

Hello Colleen and Sarah,

During our meeting this past Monday, you indicate that De Beers was intending to submit a memo clarifying or updating a few items that were discussed. For example, I believe it was around Constructed Wetlands Maintenance

[De Beers and ENR to review transcripts to see what was said with respect to use of organic stockpile in its entirety for reclamation.](#)

[Action - De Beers to correct via a memo or otherwise to align the schedule provided in the FCRP for demolition etc. with the financial liability estimate](#)

[Action - De Beers to confirm that quantity of suitable material for constructed wetlands is available on site.](#)

When do you expect ENR could see this memo or updated information?

Regards,

Bill

Mársı | Kinanāskomitin | Thank you | Merci | Hąı' | Quana | Qujannamiik | Quyanainni | Máhsı | Máhsı | Mahsi
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September 3 2019

Bill Pain
Environmental Scientist
Water Management and Monitoring Division
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Yellowknife, NT X1A 2L9

Dear Mr. Pain:

Re: Water License (MV2019L2-0004) Application and Final Closure and Reclamation Plan

A meeting was held on 26 August 2019 between De Beers Canada Inc. (De Beers) and the Government of the Northwest Territories, Environment and Natural Resources (GNWT-ENR) to discuss the closure estimate submitted with the Final Closure and Reclamation Plan (FCRP) for the Snap Lake Mine (the Mine). An outcome of that meeting was to provide clarification on a few items including: the quantity of organics and maintenance during Post-closure and to understand De Beers approach to staged reduction of financial security.

1. TIMELINE

There were some discrepancies in the original application package regarding the length of time for active closure. Through discussions with the GNWT regarding the RECLAIM estimate, it was noted that the mobilization/demobilization of workers and worker accommodations budget line items included activities that extended into year 9, which corresponds to the first year of Post-closure. The GNWT enquired if these activities are required in year 9 if the Closure phase ends in year 8 (2029).

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There was a provision in the estimate for three winter roads. The third winter road is required for demobilization of supplies/equipment from the mine at the end of the active closure period. Active Closure is anticipated to require 8 years and therefore the final winter road is anticipated to occur in year 9. De Beers would like to reiterate however that schedules may vary depending on operational and business constraints.

2. ORGANICS

GNWT-ENR would like clarification on:

- the quantity of material in the organics Stockpile at the Mine available for reclamation and if the entire stockpile will be used;
- the quantity of overburden required for reclamation; and
- the quantity of organic matter required for the constructed wetlands and if it is available on-site or will need to be brought from off site.

The total quantity of material in the organics stockpile is approximately 147,000 m³ (FCRP, Section 4.6.3.2). Approximately 20% of the stockpile (29,000 m³) will be crushed to rip rap size, leaving approximately 130,000 m³ of available material (Table 1). Prior to use, the organic stockpiled material will be tested and amendments applied if necessary. In addition to the organics material available in the stockpile, there is approximately 40,000 m³ of available material in the West Cell area (Table 1).

In total, approximately 170,000 m³ of material is available and approximately 107,000 m³ of material is required. Since the quantity of required material is substantially less than the quantity of available material, De Beers does not envision using all material from any single source, but to rather pull the best quality material from the available sources.

Table 1. Approximate Quantity of Materials Available and Required

| Available Quantity (m ³) | | Required Quantity (m ³) | |
|--------------------------------------|----------------|-------------------------------------|----------------|
| Organics Stockpile | 130,000 | Landform | 66,000 |
| West Cell | 40,000 | Constructed Wetland | 41,000 |
| Total Available | 170,000 | Total Required | 107,000 |

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3. MAINTENANCE DURING POST-CLOSURE

GNWT-ENR requested clarification on the Post-closure maintenance activities anticipated

As noted in the FCRP (Section 5.5), the Post-closure phase begins once active management of the site is no longer required. Activities required during this period consist of monitoring and potential contingency actions. Contingency actions would occur in response to results of monitoring data that are reviewed and evaluated by technical area specialists (e.g., Engineer of Record). If required, maintenance would be conducted.

The RECLAIM estimate included estimates for maintenance during the Post-closure. These costs are more correctly classified as closure costs as they would be incurred during active management. No maintenance is anticipated during the Post-closure period.

4. STAGED REDUCTION OF FINANCIAL SECURITY

De Beers proposed within the FCRP (Section 10.2) a framework for staged reduction of securities. De Beers proposed clear milestones for appropriate times when security should be reduced. These milestones were based on completion of major physical works to achievement of objectives. GNWT-ENR noted a discrepancy between the phased relinquishment in the FCRP (Section 10.3) and the RECLAIM report (Section 4.0).

Below is a staged reduction proposed by De Beers as presented in Table 2 of the RECLAIM report. This schedule of milestones upon which security should be reduced (Table 2 in this document) will replace the proposed milestones presented in the FCRP (Section 10.2).

Table 2 Proposed Staged Reduction of Securities

| Phase | Timeframe | Year | Reclamation/Monitoring Milestone |
|---------|-------------------|------|---|
| Phase 1 | Year 4 of Closure | 2024 | <ul style="list-style-type: none">• ICM complete• Wetland and influent storage pond construction complete• North Pile water conveyance structure construction complete• North Pile cover complete (except landfill)• Construction of first winter road complete |

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| Phase | Timeframe | Year | Reclamation/Monitoring Milestone |
|---------|-------------------------|------|---|
| Phase 2 | Year 8 of Closure | 2028 | <ul style="list-style-type: none"> • Building and equipment demolition and disposal complete • Chemical and hazardous waste removal complete • Landfill cover complete • Closure of underground mine portals complete • Contaminated soil remediation complete • Landforming and revegetation complete • Construction of second winter road complete • Closure monitoring and maintenance (years 1 to 8) complete • Water treatment/pumping complete • Removal of water treatment/pumping system complete |
| Phase 3 | Year 5 of Post-closure | 2033 | <ul style="list-style-type: none"> • Construction of final winter road complete • All mobilization/demobilization complete • Post-closure monitoring and maintenance for years 1 to 5 complete |
| Phase 4 | Year 10 of Post-closure | 2038 | <ul style="list-style-type: none"> • Post-closure monitoring and maintenance for years 6 to 10 complete |
| Phase 5 | Year 15 of Post-closure | 2043 | <ul style="list-style-type: none"> • Post-closure monitoring and maintenance for years 11 to 15 complete |

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| Phase | Timeframe | Year | Reclamation/Monitoring Milestone |
|---------|-------------------------|------|---|
| Phase 6 | Year 20 of Post-closure | 2048 | <ul style="list-style-type: none">• Post-closure monitoring and maintenance for years 16 to 20 complete• End of Post-closure phase |

Through discussions with GNWT-ENR regarding the RECLAIM estimate, it was noted that relinquishment of security would need to consider various elements, including but not limited to, submission of a Reclamation Completion Report and a Performance Assessment Report for each major facility. The RECLAIM report submitted with the FCRP presented a staged reduction in security that assumed 100% reduction in direct costs after completion of a reclamation activity (as summarized in Section 4, Table 10 of the RECLAIM report. It is understood that the significant portion of the securities will be returned upon completion of the reclamation activity, and that the remainder would be returned upon submission and acceptance of the Performance Assessment Report.

CLOSING

We trust this information will meet the need to enable your further review, but should you require further information or have any questions or concerns, please feel free to contact me by phone at (403)-464-2596 or by email at colleen.prather@debeersgroup.com.

Sincerely,



Colleen Prather, Ph.D., P.Biol.
Regulatory Specialist

Cc: Angela Love, MVLWB
Sarah McLean, De Beers
Michelle Peters, De Beers
Sean Whitaker, De Beers