

October 29, 2021

Mackenzie Valley Land and Water Board
7th Floor – 4910 50th Avenue
P.O. Box 2130
Yellowknife, NT
X1A 2P6

Your File: MV2020L1-0011

Attention: Angela Love, Regulatory Specialist

Dear Angela:

Re: Additional Information for Canadian Natural's Water Licence Application for Arrowhead and Netla 13-Well Abandonment and Reclamation Program Supporting Land Use Permit MV2019X0014

Please find below responses to your request for additional information in support of Canadian Natural Resources Limited's Water Licence application to accompany the previously granted Land Use Permit (MV2019X0014) to conduct abandonment and reclamation activities for 13 wells in the Arrowhead and Netla Areas north and northeast of Fort Liard, in the Dehcho Region, Northwest Territories. We have provided responses to your requests in the order they appear in your letter dated October 29, 2021. MVLWB Requests for additional information are in **Bold Font**. Canadian Natural Responses are below the request in standard font.

1. Engagement – Application Form Item 14

The MVLWB *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*³ requires applicants to conduct pre-submission engagement with all potentially affected parties. CNRL identified the engagement log and Engagement Plan were updated to identify how they will engage with rights holders and affected parties throughout the authorization. Upon review, Board staff note that the table under section 4, Triggers for Engagement, in the submitted Engagement Plan lists the Rights Holders/Potentially Affected Party as:

- **Acho Dene Koe First Nation**
- **Acho Dene Koe Band Land Services**
- **Nahanni Butte First Nation**
- **Sambaa K'e First Nation**
- **Hamlet of Fort Liard**

The engagement log submitted with the additional information to the Application indicates Nahanni Butte First Nation, Sambaa K'e First Nation, and Hamlet of Fort Liard were engaged with on November 12, 2020; however, follow-up with Nahanni Butte First Nation, Sambaa K'e First Nation, and Hamlet of Fort Liard is not described. Follow-up with Nahanni Butte First Nation, Sambaa K'e First Nation, and Hamlet of Fort Liard and revise the engagement log accordingly.

Canadian Natural has updated and attached the Engagement Log.



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2. Water Source Capacity – Application Form Item 7

Additional details on the withdrawal rates, showing they would be below 10% of the instantaneous flow, was requested in the November 23, 2020 incomplete letter as several water sources identified in the November 2020 Application were missing. In response, CNRL stated that the proposed water use volume was less than 100m³/source, which is below the threshold limit requiring a water licence and did not provide any further details. Board staff note that details on each water source is required whether or not the volume of the individual source is under threshold of triggering a standalone water licence. The trigger for a Water Licence is the cumulative volume being requested, not the individual water sources.

The total estimated available capacity and the total proposed water use for all uses (winter road construction, well abandonment, camp/domestic use, etc.) from each source should be clearly provided for easy comparison by reviewers. CNRL should update its Water Licence Application to clearly provide the following information for all water sources:

Water Source	Capacity of Water Source, including units	Other Users of the Water Source	Comparison of Total Proposed Water Use to Available Capacity
i.e. Muskeg River	[Calculated 10% of instantaneous flow.]	N/A	20,000 m ³
i.e. - Unnamed Lake D-21 (POD 282)	Estimated surface area: 225,000 m ² x 0.1 m = 22,500 m ³	N/A	7,000 m ³

As identified by CNRL, field determinations are required to determine instantaneous flow, and therefore, the total proposed water use volumes from the proposed rivers and creeks will be determined once crews are at the locations. Similarly, field verification is required to confirm water source depths for all sources from which water use may exceed 99m³/day. CNRL must provide its field verification plan(s) for collecting the outstanding information required. Results of field verification will be required prior to obtaining approval to use the affected sources. Field verification should occur prior to each season of use, avoiding freshet. For lakes, the depth verification must be measured in at least three locations >20 m from shore and approximately 20 m apart. Board staff recommend CNRL reference the Boards [Method for Determining Available Winter Water Use Capacity for Small-Scale Projects](#) for submission requirements.

Canadian Natural has updated the Water Licence Application to include the requested information. For sources where depths and/or flow rates are not known, field verification will take place during the winter season as the access construction takes place. For lakes (POD 287 and POD 288), depth verification will be measured in at least three locations >20m from shore and approximately 20m apart. For rivers and creeks (Muskeg River, Rabbit Creek, Netla River), instantaneous flow measurements will be taken at the withdrawal location to ensure withdrawal rates do not exceed 10% of instantaneous flow rate.



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3. Security Estimate – Application Form Item 14

An estimate for security using the RECLAIM model for oil and gas was requested in the November 23, 2020 incomplete letter. In response, CNRL provided an estimate using the RECLAIM model for oil and gas and noted that there was overlap with security provided for the Land Use Permit and provided to Office of the Regulator of Oil and Gas Operations (OROGO) for the downhole abandonments and that those amounts should be deducted from the total.

Board staff note that OROGO's requirement for Proof of Financial Responsibility (PFR) which they hold, may be used to pay claims made under section 63 of the *Oil and Gas Operations Act* (OGOA) for the actual loss or damages from or for cost associated with clean-up of debris, spills or authorized discharge, emission or escape of oil and gas, with terms defined as follows:

- “Actual loss or damage” as including loss of income, including future income and the loss of hunting, fishing and gathering opportunities by Aboriginal peoples;
- “Debris” as an installation or structure that has been abandoned without authorization or any material that has broken away or been jettisoned or displaced in the course of an approved work or activity; and
- “Spills” as a discharge, emission or escape of petroleum.

Board staff also note that the current security required under the associated Land Use Permit (Permit) [MV2019X0014](#) is in the amount of \$125,600.00 and recommend that any changes to the existing terms and conditions of this Permit should be applied for with an Amendment.

Canadian Natural understands the OROGO security is a separate matter. No reductions in total security calculated with the RECLAIM model are being requested at this time. Canadian Natural may follow-up with an Amendment to the Land Use Permit.

Please direct any questions or concerns regarding this application to my attention at 403-803-4745 or jessica.gysler@cnrl.com or to Margot Ferguson at 403-817-4527 or margot.ferguson@envirosearch.ca.

Sincerely,
Canadian Natural Resources Limited

A handwritten signature in black ink, appearing to read 'J. Gysler'.

Jessica Gysler
Reclamation Coordinator
Attachments:

1. Updated Engagement Log
2. Updated WL Application Form