

31 July 2019

 Joseph Mackenzie, Chair
 Wek'èezhii Land and Water Board
 #1, 4905 – 48th Street
 Yellowknife, NT, X1A 3S3

Re: Notification of 2020 Under-ice Action Level Exceedance as per Water Licence W2012L2-0001 Part J, Condition 9

Dear Mr. Mackenzie,

Water Licence W2012L2-0001 Part J, Condition 9a requires Dominion Diamond Mines ULC (Dominion) to notify the Wek'èezhii Land and Water Board (the Board) regarding exceedances of any Action Level defined in the approved Aquatic Response Framework within 60 days of detection. Dominion has received the analytical results from the 2020 under-ice Aquatic Effects Monitoring Program (AEMP) and is providing notification, herein, to the Board, of water quality variables at specific sampling locations that have exceeded an Action Level (Table 1).

Table 1: 2020 Under-ice Aquatic Response Framework Action Level Exceedance

Parameter	Lake where Action Level was Exceeded		
	Low Action Level	Medium Action Level	High Action Level
Potassium	Leslie	-	-
Chloride	Leslie	-	-
Dissolved oxygen	Cujo	-	-

- = no Action Level was exceeded.

In response to the Action Level exceedances, Dominion suggests the following:

Potassium

A low Action Level for potassium was exceeded during the under-ice season in 2020 at Leslie Lake. The average concentration of potassium in April 2020 at Leslie Lake was greater than 50% of the water quality benchmark. However, the average concentration in April 2020 (i.e., 37.9 mg/L) was lower than the average concentration in April 2018 and 2019 (i.e., 60.6 mg/L in April 2018 and 49.2 mg/L in April 2019). The [Potassium Response Plan Version 3.0](#) was submitted to the Board on 30 August 2019 and approved on 19 December 2019, and addresses the low Action Level exceedance in Leslie Lake.

Chloride

A low Action Level for chloride was exceeded during the under-ice season in 2020 at Leslie Lake. The average concentration of chloride in April 2020 at Leslie Lake was greater than 50% of the water quality benchmark. However, the average concentration in April 2020 (i.e., 220



mg/L) was lower than the average concentration in April 2018 and 2019 (i.e., 288.8 mg/L in April 2018 and 243.3 mg/L in April 2019). The [Chloride Response Plan Version 2.1](#) was submitted on 19 July 2019, approved on 16 October 2019, and addresses the low Action Level exceedance in Leslie Lake.

Dissolved Oxygen

A low Action Level for dissolved oxygen (DO) was exceeded during the under-ice season in 2020 at Cujo Lake (i.e., volume-weighted DO of 4.91 mg/L). The currently approved Response Plan for DO (i.e., [Version 1.2](#) approved on 4 April 2018) addresses the low Action Level exceedance in Cujo Lake. No update to the Response Plan for DO is needed. As specified in the 2019 Annual AEMP Report, Cujo Lake Aeration Memo, efforts to mitigate low under-ice DO concentrations in Cujo Lake through the installation of an aerator continued in 2020. The results of additional monitoring in Cujo Lake during the 2019 to 2020 under-ice season will be reported as part of the next AEMP (i.e., 2020 AEMP in March 2021).

Dominion trusts that you will find this information to be clear and informative. Should you have any questions, please contact Laura Pacholski, Environment Advisor – Fisheries and Aquatics, at Laura.Pacholski@ddcorp.ca or 403 910-1933 ext 2404 or the undersigned at Harry.O'Keefe@ddcorp.ca or 403-910-1933 ext 2408.

Sincerely,

A handwritten signature in blue ink that reads "Harry O'Keefe".

Harry O'Keefe
Superintendent – Environment