

18 November 2021

Jaime Steele, Manager
Diamond Resource Management
North Slave Regional Office
Department of Lands
Government of the Northwest Territories
#140 Bristol Avenue, Yellowknife Airport
Yellowknife NT, X1A 3T2

Dear Mr. Steele:

Re: W2020L2-0004: Ekati Diamond Mine 2021 Aquatic Effects Monitoring Program - Hydrology Program

In accordance with Part B, Condition 18 of Water Licence WL2020L2-0004 (formerly Water Licence W2012L2-0001), Arctic Canadian Diamond Company Ltd. (Arctic) is notifying the Government of the Northwest Territories (GNWT) and the Wek'èezhii Land and Water Board (the Board) of missed sampling, which represents non-compliance of Arctic to “operate in accordance with the approved Aquatic Effects Monitoring Program (AEMP) Design Plan” (Part J, Condition 2).

Manual flow measurements are conducted at the Ekati Mine site as part of the AEMP stream hydrology program. Hydrometric stations are installed annually at a subset of streams around freshet and operate until Mid-September collecting continuous data during the open-water season. Manual flow measurements are taken throughout the open-water season at these hydrometric stations to record a range of flows under different flow conditions in order to validate developed empirical relationships between water level and streamflow.

As per the approved AEMP Design Plan, three to four manual flow measurements are required to be collected per open-water season as part of the stream hydrology program as described in Table 4.2-3 from Ekati 2020 to 2022 AEMP Design Plan Version 7.1¹. However, due to particularly high levels of precipitation and a delayed spring freshet in 2021, (i.e., water levels were too deep and velocities too high to be considered safe for collecting manual flow measurements) manual flow measurements could not be collected at Slipper-Lac de Gras and Logan Outflow stations during freshet. These conditions persisted at Slipper-Lac de Gras and Logan Outflow stations, resulting in missed flow measurements. Flow measurements were collected once the water levels decreased and were considered safe.

In total, two flow measurements were collected at Slipper-Lac de Gras station during the open-water season of 2021 (i.e., July 25, and August 11, 2021) and one at Logan Outflow station (i.e., September 20, 2021). Arctic does not foresee the lack of manual flow measurement data in 2021 at Logan Outflow and Slipper-Lac de Gras stations to pose a significant risk as the hydrology data have been collected annually for 27 years at the Ekati Mine. Hence, there is a strong historical hydrology dataset for Arctic to refer to for its understanding

¹ [Ekati 2020 to 2022 AEMP Design Plan Version 7.1](#)



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of the empirical relationships between water level and stream flow. Furthermore, the manual flow measurements are only one part of a larger hydrology program in place at the Ekati Mine.

The safety concerns encountered to complete the flow measurements at Slipper-Lac de Gras and Logan Outflow stations in 2021 are being investigated by the Arctic team to find alternatives in order to avoid a serious incident while mitigating and preventing potential future non-compliances. Arctic trusts that you will find this to be clear and informative. Should you have any questions please contact Giovanna Diaz, Environmental Advisor – Fisheries and Aquatics at Giovanna.diaz@arcticcanadian.ca or 403 910-1933 ext 2405 or the undersigned at Laura.Pacholski@arcticcanadian.ca or 403 589-0689.

Sincerely,

Original signed by Laura Pacholski

Laura Pacholski

Team Lead – Environmental Management and Monitoring

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