

WATER RESOURCES AUTHORITY

ESTABLISHED BY THE WATER RESOURCES ACT, 1995

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REF: DR 8-26

March 19, 2020

Mr. Peter Knight Chief Executive Officer National Environment and Planning Agency (NEPA) 10 Caledonia Avenue Kingston 5

Dear Mr. Knight,

Re: Environmental Impact Assessment (EIA) of SML 173 by Conrad Douglas and Associates

The Water Resources Authority (WRA) has completed its review of the above-captioned with particular attention being paid to the outlined hydrological concerns and hereby provide the following comments for NEPA's overall consideration which it is and hoped, will provide guidance to the deliberation process:

- Page 26: The Water Resources Authority (WRA) is missing from the acronyms table.
- Page 33: There are 10 known caves within the SML, and in this karstic region these would be likely access points to groundwater and underground rivers. This should be mentioned in this section.
- Page 121: There are a few more caves within 5 km of the SML. Both those and these caves should be mentioned in the summary as previously commented on page 33.
- Page 124: It might be in Noranda's interests to identify and ground-truth all known caves in the SML, for sake of transparency. Question arises as to why these caves were ground-truthed, and the others were not. What was the result of the ground truthing, what was observed therein?
- Page 127: The Rio Bueno sub-Basin boundary should include known contributions from Quashie, Cave and Lowe Rivers which flow directly to the head rising. It shouldn't just be the surface drainage divide.
- Page 129: The present map does not appear to show the known hydrostratigraphy in the region.
- Page 130: Dye Tracing by Bristol proved the Quashie and Cave river connection; dye tracing by the WRA in 2018 proved the Lowe River connection. Lowe River had not been traced prior to the WRA's test in 2018.
- Page 131: Cave River connection should be included on this map also from historical analysis.
 WRA completed a recent (2019-2020) dye trace at Cave River which validated the historical connection to Dornoch.

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Jamaica's Hydrologic Agency

Board: Dr. Parris Lyew-Ayee Jr. (Chairman), Prof. Michael Taylor, Mr. Michael Brown, Miss Nadeen Spence, Mr. George Grant, Ms. Stephanie Abrahams, Ms. Georgia Hamilton, Ms. Novelette Howell, Ms. Allison Rangolan Mr. Peter Knight Re: Environmental Impact Assessment (EIA) of SML 173 by Conrad Douglas and Associates Page 2 March 19, 2020

- Page 134: the location of the WRA's gauging station should be stated, along with the source of data.
- Page 135: What is the specific minimal area for which the surfaces will be asphalted?
- Page 430: If mining is allowed, there should be a strict monitoring regime in order to verify the impact or lack thereof of bauxite mining in Karstic regions
- Page 432: there should be appropriate set backs from surface water (rivers etc) to avoid direct contact for contamination to take place....for ground water all caves and sink holes close to mining must have setbacks as determined by regulatory agencies.

The WRA remains available for any further discussion and trust that the overall review will achieve the aim of identifying salient concerns and also providing suitable options that resolve and or mitigate same.

Sincerely, Water Resources Authority

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Peter Clarke J.P., P.E Managing Director