Environment Canada **Environnement Canada**

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Via Email

RE: NWB2MEA/TR/E5 – Cumberland Resources Ltd. – Geochemical Characterization of Meadowbank Airstrip Materials

On behalf of Environment Canada (EC), I have reviewed the above mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act,* the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Golder Associates Ltd. (Golder) has submitted a geochemical characterization report of materials used in the construction of the Meadowbank Gold Project airstrip on behalf of Cumberland Resources Ltd. to fulfill its Part E, Item 5 licence requirement. Specifically, rock and till deposits to be used in airstrip construction underwent chemical composition, acid rock drainage, and metal leaching analysis. At the present time, approximately 2,200 m^3 (5,900 tonnes) of excavated intermediate (IV) rock and 44,200 m^3 (81,800 tonnes) of till have been designated for airstrip construction. However, approximately 46,700 m^3 of additional fill material is required to complete the airstrip. From a geotechnical perspective, the quality of the previously excavated material is inadequate and as a result, it is anticipated that IV rock, or a combination of IV rock and ultramafic rock (UM) excavated within the first year of pre-production from the Third Portage starter pit will used as the additional fill material. The construction of the airstrip has commenced and will resume in the upcoming field season. The proponent has constructed intercept ditches to divert runoff water away from the working area of the airstrip, and collector ditches to channel runoff water from the construction zone into five (5) settling ponds. In addition, sediment fences have been installed down gradient of working areas to prevent silt from entering any water bodies.

The geochemical characterization study has revealed that the UM rock is not potentially acid generating. Starter pit IV rock samples have variable potentials of generating acid rock drainage. The starter pit iron formation (IF) rock will not to be used in airstrip construction because laboratory analysis has determined that it is acid generating. Golder recommends that the IV rock can be used if there is an insufficient amount of UM rock. This would require a management strategy to mitigate acid rock drainage, such as establishing a capping layer of UM rock or other acid buffering material confirmed to be not potentially acid generating.

Environment Canada is satisfied with Golder's geochemical characterization report for airstrip materials to be used in the Meadowbank Gold Project. Environment Canada looks forward to receiving further information concerning the progress of the airstrip's construction.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact me if you have any questions or comments with regards to the foregoing at (867) 975-4631 or by email via david.abernethy@ec.gc.ca.

Sincerely,

David W. Abernethy
Environmental Assessment Technician

cc. Colette Spagnuolo – Environmental Assessment / Contaminated Sites Specialist, Environment Canada, Iqaluit