**NIRB File No. 12MN043**
DFO File No.: NU-12-0010

November 9, 2012

Scott Trusler
Environmental Permitting Lead
MMG Minerals and Metals Group
2600-1177 West Hastings St.
Vancouver, BC, V6E 2K3

*Sent via email*: Scott.Trusler@mmg.com

**Re: Notice of Part 4 Screening for Minerals and Metals Group's "Izok Corridor Project" proposal**

Dear Scott Trusler:

On September 4, 2012 the Nunavut Impact Review Board (NIRB or Board) received Minerals and Metals Group's (MMG) "Izok Corridor Project" proposal (the Project) directly from MMG. On September 5, 2012 the NIRB acknowledged receipt of MMG's proposal and indicated that pursuant to the regulatory requirements as outlined in the proposal as submitted, the Board would require a positive conformity determination from the Nunavut Planning Commission (NPC) and a referral for screening from an authorizing agency prior to the Board proceeding to screen the project proposal in accordance with Article 12, Part 4 of the Nunavut Land Claims Agreement (NLCA). On September 26, 2012 the NIRB received a screening referral from the Kitikmeot Inuit Association (KIA). On October 26, 2012 the Board issued additional correspondence indicating that the NIRB would require a conformity determination from the NPC and supporting materials from authorizing agencies before the NIRB would be able to commence screening of the proposal. On November 2, 2012 the NIRB received a positive conformity determination (North Baffin Regional Land Use Plan) from the NPC and a referral to screen the project proposal from Fisheries and Oceans Canada (DFO). The NIRB has assigned this project proposal file number **12MN043** – please reference this file number in all future project related correspondence.

MMG is proposing to develop and operate a base metal mining and milling project with an estimated operating life of twelve years and an average production rate of approximately 2 million tonnes of ore per annum. The mine as proposed would produce primarily zinc concentrate with some copper and a small amount of lead concentrates. The project would involve the development of open pit and underground mining infrastructures at both the Izok and the High Lake mine sites, an all-season access road linking the Izok Mine and High Lake Mine with the port at Grays Bay, and a port facility at Grays Bay. MMG has proposed that the pre-

construction activities would begin in 2014, the construction phase for the development would begin in 2015, and the mine operations would begin in 2017 lasting approximately twelve years. This this would be followed by two to three years of closure and reclamation activities with additional seven years for post-closure monitoring.

The proposed "Izok Corridor Project" is located in the Kitikmeot region with the Izok Mine site situated approximately 260 kilometres (km) southeast of Kugluktuk; the High Lake Mine site situated approximately 300 km northeast of the Izok site and 187 km southeast of Kugluktuk; and the Grays Bay Port site situated approximately 328 km north of the Izok site and 179 km east of Kugluktuk. The Izok Mine site proposed as a part of the Izok Corridor Project is located approximately 3 km of the Nunavut–Northwest Territories border.

The following is a *summary* of the main project activities and components associated with the Izok Corridor Project proposal:

- Development of five deposits at the Izok Mine site using open pit mining (Central, North, Northwest and South deposits) and underground mining methods (Inukshuk deposit);
- Development of three deposits at the High Lake Mine site using open pit mining (AB and D deposits) and underground mining methods (West Zone deposit);
- Facilities and site infrastructure to be developed at the **Izok Mine** site include:
    - Diversion dam and diversion channel to re-route water around Izok Lake from Iznogoudh Lake into Itchen Lake;
    - Dewatering of Izok Lake to access the deposits;
    - Processing plant to process ore from both the Izok and High Lake mines; process plant to include Run of the Mill (ROM) stockpiles, primary jaw crusher, crushed ore stockpile, mill facility with an on-site processing rate of approximately 6,000 tonnes per day of ore, floatation circuits, tailings and concentrate thickeners and filters, process water tanks, reclaim water treatment facility, and reagent storage and reagent mixing building;
    - Concentrate storage facility for storage of copper, lead and zinc concentrates;
    - Storage of waste rock and overburden using sub-aerial deposition method within the former Izok Lake catchment area;
    - Storage of tailings using sub-aerial frozen deposition method (dry stack facility) within the former Izok Lake catchment area with installation of thermal protection cover at closure;
    - Transportation of concentrate products to the storage facility at Grays Bay Port via the all-season access road;
    - Explosive storage facility for the storage of explosives accessories – emulsion blasting agents to be manufactured at the High Lake facility and transported to work sites;
    - Surface water diversion system, water holding pond, effluent treatment facility, potable water treatment facility and sewage treatment facility;
    - Permanent accommodation complex with maximum capacity of approximately 700 to 800 personnel;
    - Additional site infrastructure to support the mine; including power supply, warehouse, maintenance shops, administration complexes and offices and dry facilities, and the use of waste rock for site development;

- Water withdrawal from Itchen Lake;
- Discharge of treated surface water, effluent, sewage and grey water into Itchen Lake;
- Landfill within the Izok Lake catchment area;
- Fuel tank farm facility for storage of low sulphur diesel and aviation fuel, with approximately 35 million litres (L) of low sulphur diesel and 100,000 L of aviation fuel required annually, with aviation fuel stored in 45 gallon drums on site, and ongoing transportation of diesel fuel to site from bulk fuel storage at Grays Bay port;
- Use of existing airstrip at Ham Lake camp or another airstrip near Ham Lake that is proposed to be developed as part of the pre-development activities;

- Facilities and site infrastructure to be developed at the **High Lake** Mine site include:
  - Primary crusher to crush High Lake mine ore;
  - Ore stockpiles;
  - Transportation of crushed ore to the Izok Mine site for processing via the all-season access road;
  - Storage of waste rock and overburden using the sub-aerial deposition method immediately to the west of High Lake;
  - Explosive storage and manufacturing facilities – emulsion blasting agents to be manufactured at the High Lake facility and transported to work sites;
  - Surface water diversion systems, water holding pond, effluent treatment facility, potable water treatment facility and sewage treatment facility;
  - Permanent accommodation complex with maximum capacity of approximately 200 to 250 personnel;
  - Additional site infrastructure to support the mine; including power supply, warehouse, maintenance shops, administration complexes and offices and dry facilities, and the use of waste rock for site development;
  - Water withdrawal from lakes 4, 5 and 15;
  - Discharge of treated contact water into either the Kennarctic River or High Lake, and discharge of treated sewage and grey water into the Kennarctic River;
  - Landfill within the High Lake catchment area;
  - Fuel tank farm facility for storage of low sulphur diesel and aviation fuel, with approximately 7 million L of low sulphur diesel and 50,000 L of aviation fuel required annually, with aviation fuel stored in 45 gallon drums on site, and ongoing transportation of diesel fuel to site from bulk fuel storage at Grays Bay port;
  - Use of existing airstrip at Sand Lake or development of another airstrip near High Lake with associated airport facilities;
- Facilities and site infrastructure to be developed at **Grays Bay** on the Coronation Gulf include:
  - Port facility with dock to accommodate 50,000 deadweight tonnage (DWT) bulk-carrier ships;
  - Concentrate storage facility for copper, lead and zinc concentrates with capacity to store 10 months of concentrate product;
  - Fuel storage facilities with storage capacity of approximately 50 million L diesel fuel and plan to ship fuel via truck haul to Izok and High Lake Mine sites;

    - Storage facility to store explosive and blasting materials;
    - Water supply and desalination plant, water holding pond, refuse disposal and sewage treatment facilities;
    - Permanent accommodation complex with maximum capacity of approximately 25 to 40 personnel;
    - Additional site infrastructure to support the port facility; including power supply, port operation and administration offices, warehouse and laydown areas, dock and ship loader facility;
    - Discharge of treated sewage and grey water to marine environment;
    - Use of airstrip at Grays Bay that is proposed to be developed as part of the pre-development activities;
- Construction of incineration plants at the Izok Mine, High Lake Mine and Grays Bay Port sites for the incineration of combustible solid waste, domestic garbage and waste oil;
- Transportation and storage of chemicals and hazardous wastes;
- Seasonal use of temporary winter road from the proposed Izok Mine to the existing Tibbitt-Contwoyto Ice Road near the Lupin Mine or Jericho Mine to bring in construction materials and equipment from Yellowknife until the all-season road has been constructed;
- Seasonal use of temporary winter road from the proposed High Lake Mine to Grays Bay to bring in construction materials and equipment for the construction of the High Lake Mine and to facilitate the construction of the all-season access road;
- Construction of site roads to link facilities within each site using quarried and waste rock;
- Construction of an approximately 350 km all-season access road linking the Izok and High Lake mines with the port at Grays Bay. Road to include approximately 60 single-span bridges, 10 multi-span bridge structures and 80 major culvert and rock fill locations;
- Development and extraction of granular resources along the proposed access road;
- Marine shipment of fuel, concentrate and supplies during ice-free months through the west and east of the Northwest Passage for a total of 16 round trips during peak production (total of 5 ships estimated to be required during peak production years). No ice-breaking is planned of continuous land fast ice; and
- Decommissioning and reclamation activities.

The NIRB acknowledges that MMG indicated within its application that the results of the current NIRB screening of the Izok Corridor Project proposal may lead to a decision that the Project be reviewed pursuant to Section 12.5 of the Nunavut Land Claims Agreement (NLCA).

Further, the NIRB notes that MMG has submitted a Type A water licence application to both the NIRB and the Nunavut Water Board (NWB) in the interest of initiating a coordinated NIRB-NWB process, should the Project be referred to Review.

MMG has also indicated within its proposal that it intends to apply to the NIRB for an exception to a potential future Review process pursuant to Section 12.10.2(b) of the NLCA, to allow authorizations for certain project activities to be issued prior to the completion of a potential future Review by the NIRB. MMG's project proposal indicates that activities such as early staging of equipment and materials, upgrades and development of temporary facilities, and the development of select portions of transportation infrastructure associated with the Project may be included within a future application for exception. A full description of these proposed activities may be found within MMG's project proposal.

All documents received and pertaining to this project proposal can be obtained from the NIRB's ftp site at http://ftp.nirb.ca/01-SCREENINGS/ACTIVE%20SCREENINGS/12MN043-MMG-%20Izok%20Corridor/ including:

- *Application Cover Letter*
- *Izok Corridor Project Proposal – Volume 1*
- *Izok Project Proposal – Volume 2: Appendices*
    - *NIRB Part 1 Summary Application Form in English, Inuktitut and Inuinnaqtun*
    - *Non technical Project Proposal summary in English, Inuktitut and Inuinnaqtun*
    - *NIRB Part 2 Project Specific Information Requirements*
    - *Figures*
    - *Site Photos*
    - *NWB Type 'A' Water Licence Application*
    - *AANDC Application for Federal Crown Land at Grays Bay*
    - *Kitikmeot Inuit Association Application for Access to Inuit Owned Land*
    - *Fisheries and Oceans Authorization for Works or Undertakings Affecting Fish Habitat*
- *KIA Referral for Screening*
- *DFO Referral for Screening*
- *NPC Conformity Determination*

Pursuant to Part 4, Article 12 of the NLCA, the NIRB shall proceed to screen this project proposal. The NIRB may request additional information at any time during the process. The NIRB will copy you on screening process related correspondence and upload related documents to the above ftp site for public access.

The NIRB is copying parties and municipalities potentially affected by MMG's project proposal with this letter, and we invite interested parties to review the application information available at the ftp link listed above and to comment directly to the NIRB by **November 30, 2012**. Please be advised that the NIRB is providing this notice to a broad distribution list as a result of the proposed routing of project shipping routes and the proximity of proposed infrastructure to the Nunavut—Northwest Territories border.

The NIRB would like parties to provide comments regarding:

- Whether the project proposal is likely to arouse significant public concern; and if so, why;
- Whether the project proposal is likely to cause significant adverse eco-systemic and socio-economic effects; and if so, why;
- Whether the project is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (please provide any recommended mitigation measures); and,
- Any matter of importance to the Party related to the project proposal.

Please send your comments to the NIRB at info@nirb.ca or via fax at **(867) 983-2594**.

If you have any questions or require clarification, please contact Sophia Granchinho, Technical Advisor, at (867) 793-4633 or sgranchinho@nirb.ca or Glenn Sørensen at (867) 983-4606 or gsorensen@nirb.ca.

Sincerely,

Sophia Granchinho
Technical Advisor
Nunavut Impact Review Board

cc: Distribution List
Sahba Safavi, MMG Resources Inc.
Phyllis Beaulieu, Nunavut Water Board
Wynter Kuliktana, Kitikmeot Inuit Association
Jeff Mercer, Aboriginal Affairs and Northern Development Canada
Tracey McCaie, Aboriginal Affairs and Northern Development Canada
Derrick Moggy, Fisheries and Oceans Canada

Enclosures (3): Comment Forms (English, Inuktitut and Inuinnaqtun)