



May 05, 2023

Kelli Bergh
Vice President, Environment and Permitting
BMC Minerals Ltd.

By Email: kelli.bergh@bmcm minerals.com

Re: Kudz Ze Kayah Quartz Mining License Application, Phase 2/3 Information Request

Dear Ms. Bergh,

On March 24, 2023, Mineral Resources Branch (MRB) sent BMC Minerals Ltd (BMC) a letter outlining the regulatory process and considerations for the Kudz Ze Kayah project (the "Project") in relation to the quartz mining license application (the "application"). Following this letter, on April 15, 2023, we confirmed that our phase 2/3 review was near completion and may include an information request. In that correspondence MRB suggested that the review be discussed at our next scheduled meeting prior to finalization of an information request, which took place on April 25, 2023.

We have now completed our adequacy review of the Heritage Resource Protection Plan, Waste Management Plan, Hazardous Materials Management Plan, Sediment and Erosion Control Plan, and the Spill Contingency Plan and determined that we require additional information. The information required to support your application is attached to this letter, a separate excel comment tracker will be sent to you via email.

The information request attached to this letter, along with the February 27, 2023 request for a Socio-economic Monitoring and Reporting Plan, completes our Phase 2 and Phase 3 adequacy review. Once you have taken the time to consider the requests, please confirm your estimated timeline for response.

Should you have any questions or concerns, I am available at (867) 667-3126 or todd.powell@yukon.ca.

Sincerely,



For/ Todd Powell
Director, Mineral Resources Branch

CC: Allan Nixon, VP External Affairs, BMC Minerals Ltd.
Keith Maguire, Director, Major Projects Yukon
Caleb Light, A/Director, Yukon Water Board Secretariat
Chief Charlie, Liard First Nation
Chief Loblaw, Ross River Dena Council
Chief McCook, Kwadacha Nation
Chief Manygreghorses, Dease River First Nation

Enclosed: Information Request 2: Phase 2/3 Plan Review

Information Request 2: Phase 2 / 3 Plan Review

For: BMC Minerals Ltd. QML application for the Kudz Ze Kayah Mine

Issued by: Mineral Resources Branch, Yukon Government.

Date: May 05, 2023

Heritage Resource Protection Plan:

Document Reference	Comment	Required Action
Forward	A concordance table is missing from the plan	BMC is to provide a concordance table that demonstrates how all applicable decision document terms and conditions and proponent commitments have been addressed. This concordance table should also indicate where revisions have been made based upon the information requests outlined in this table.
Throughout Plan	The plan notes that “Heritage impact assessments have been completed for the Project footprint and Access Road (including all potential borrow areas).” 31 borrow sites are identified in Lands application 2022-1330. Table 3-1 notes “Heritage assessments were conducted at 18 proposed borrow pits along the existing KZK Tote Road”. It is not clear whether the areas assessed in the 2017 and 2018 HRIAs fully cover the area under application. The final Heritage Resource Protection Plan will also form a part of the lease for borrow sites and may be attached to the amended road lease, should these authorization advance. It is in the interest of all parties to have consistent plans under different authorizations.	Provide clarity on the number of borrow sites identified for the project and which have been included in the heritage assessments. Ensure plans are adequate for both authorizations for a streamlined approval process.

Section 4: Table 4-1 Heritage Resources Contact Information	The table has outdated and incomplete contact information.	BMC to update this table with current contact information. For Energy Mines and Resources the contact should be the Major Mines Licensing Unit at emr-qml@yukon.ca , (867) 667-3432.
Section 3: Heritage Resource Assessmen ts	The section of the plan identifies the various heritage assessments that have taken place in the project area. YG's Plan Requirement Guidance for Quartz Mining Projects suggests adding these assessments to the plan as appendices.	Add all heritage assessments to the HRP plan as an appendix.

Waste Management Plan:

Document Reference	Comment	Required Action
Forward	A concordance table is missing from the plan	BMC is to provide a concordance table that demonstrates how all applicable decision document terms and conditions and proponent commitments have been addressed. This concordance table should also indicate where revisions have been made based upon the information requests outlined in this table.
Section 1: Table 1-1	BMC states the required permits for waste management but does not indicate if any permits have been applied for yet, or the state of the application.	BMC to update table with additional columns stating status of permits, and their expiry dates. Additional rows with any relevant municipal agreements or municipal water license (MN22-048) application status would be helpful as well.
Section 1: Table 1-1	BMC's current Waste Management Permit #81-096 may not cover all intended uses as described in the plan such as open burning solid waste, incinerating waste oil, and to generating /storing /transporting a variety of additional special wastes	BMC will need to review permits and amend as required. The Waste Management Plan must be reflective of the activities authorized under relevant Environment Act permits. Any activities that are not covered in

		existing permits, or a part of permit applications should be removed from this plan.
Section 1: Table 1-1	There is no permit requirement listed for installation of a septic field	BMC will need a permit to install a sewage disposal system from Environmental Health and Safety Branch. BMC to review the authorizations table further and include all necessary permitting requirements in respective plans.
Section 1: Table 1-1	The 10,000L waste oil tank listed in the plan will require registration under the Storage Tank Regulations, which has not been acknowledged in the plan anywhere.	BMC to acknowledge that the 10,000L waste oil tank listed in the plan will require registration under the Storage Tank Regulations.
Section 2: Item 2.1.1 Storage Areas	The plan states that surface runoff water from the waste management facility will be diverted into sumps. More information / clarification is required on size, location, configuration, and downstream infrastructure from the sumps	BMC to provide clarification regarding size, location, configuration, and downstream infrastructure on the sumps in a plan revision.
Section 2: Item 2.1.2 Storage Containers and Tanks	This section mentions an appropriately sized berm around the waste oil tank but does not reference a specific size.	BMC to clarify what size (capacity) berm they intend on constructing and how that size was deemed appropriate.
Section 2: Item 2.2.2 Incinerator	The plan identifies a potential solid waste incinerator model. It is unclear if currently existing and permitted incinerator under #81-096 will be replaced with the proposed model.	BMC to provide clarification in next plan submission
Section 2: Item 2.3.1 Land Treatment facility	The plan indicates water from the land treatment facility will be run through an oil water separator and then transported to the water treatment plant. Note that the land treatment facility permit will regulate the discharge of water from the facility and will require sampling prior to discharge.	BMC to acknowledge the comment with revised wording on the next plan submission

Section 2: Item 2.3.2 Oil / Water Separator	Oil / water separators (plural) are spoken about in the plan, but number of them, capacity, and configuration are not detailed.	BMC to provide more detailed information on the intended oil / water separators for the LTF.
Section 2: Item 2.3.2 Oil / Water Separator	The plan states that hydrocarbon contaminated water from the LTF, mine workshop, equipment washdown bay, and refuelling facility will be collected and passed through the oil/water separator. Depending on the concentration and contaminant type, an oil water separator may not be able to reduce all hydrocarbon contaminant concentrations to below applicable Contaminated Sites Regulation (CSR) standards. The efficacy of the oil/water separator treatment must be confirmed through sampling and any treated water containing hydrocarbon contaminant concentrations greater than CSR standards for the protection of aquatic life be transported to the on-site land treatment facility or other approved receiving location.	Update the plan to include a sampling schedule to confirm the efficacy of the oil/water separator treatment. Any treated water containing hydrocarbon contaminant concentrations greater than CSR standards for the protection of aquatic life should be transported to the on-site land treatment facility or other approved receiving location. Provide contingency measures should hydrocarbon concentration not meet CSR standards.
Section 2: Item 2.3.3 Sewage Disposal System	Sludge removed from the sewage treatment plant is mentioned to be buried at both " the Class A Facility", and "on site in an approved area". If sludge is to be submitted in areas other than the Class A Facility more information is required.	BMC to clarify where septic sludge will be disposed of.
Section 2: Item 2.3.3 Sewage Disposal System	There is no detail regarding size and type of septic field, whether sewer lines to these facilities will be frost protected, what depth of bury etc.	BMC to provide more detailed design specifics of septic system. Design Specifications for Sewage Disposal Systems , Yukon Government, 2021 should be referenced when updating this section of the plan.

Section 3: Item 3.4 Off Site Transfer	Permissions for Watson Lake landfill and Ross River Solid Waste Facility will need to be sought through the municipalities as they determine the responsibilities of their landfill.	BMC to provide evidence that a municipality such as Watson Lake or other has been engaged or given permission for off site waste transfer of all types of waste listed. A contingency plan should be included in Section 3.4 should Ross River and Watson Lake decline to receive waste from the mine site.
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Hazardous Materials Management Plan:

Document Reference	Comment	Required Action
Forward	A concordance table is missing from the plan	BMC is to provide a concordance table that demonstrates how all applicable decision document terms and conditions and proponent commitments have been addressed. This concordance table should also indicate where revisions have been made based upon the information requests outlined in this table.
Throughout document	Yukon OHSA is referred throughout the plan. Since the new legislation has come into effect, the name has changed. Please review report and change name accordingly	BMC to replace all instances of references to OHSA and Worker's Safety and Compensation Act with Workplace Health and Safety or WHS and ensure accuracy with new legislation.
Section 2: Hazardous Materials Identification and Classification	This section in the plan references WHMIS but does not specify latest revision. Even though 2015 is mentioned in Section 3.	2015 Workplace Hazardous Materials Information System Regulations must be followed and referenced appropriately throughout.
Section 2: Hazardous Materials Identification and Classification	The plan states that <i>All waste from the analytical laboratory will be either buried on site (in the Class A Storage Facility or the Waste Management Facility).</i>	BMC to clarify where exactly they want to bury the laboratory hazardous waste and what criteria will be met for each buried site.

Section 2: Table 2-1	Table 2-1 does not clearly provide required permits, registrations, or legislative requirements for each container type.	BMC to add column outlining required permits, registration, or legislative requirements for each container type.
Section 3: Employee Training	Effective July 1, 2022, records of all worker H&S Training must be maintained. (1.06.01 WHS Regulations)	BMC to revise wording to include record of training as required by WHS regulations.
Appendix C: Section 7 Explosives Storage	When storing explosives, employers must follow 14.24 – 14.29 of the Workplace Health and Safety Regulations (Yukon).	BMC to acknowledge the comment with revised wording.
Appendix C: Section 9.1 Safety Requirements	Each blast must be overseen by the holder of a Yukon Blaster's Certificate. Post blast inspection should be documented and signed off by the blaster in charge.	BMC to acknowledge the comment with revised wording.
Appendix C: Section 9.3 Explosives Transport Equipment	When transporting explosives, employers must follow 14.13 – 14.20 of the Workplace Health and Safety Regulations (Yukon).	BMC to acknowledge the comment with revised wording.
Appendix C: Section 9.6 Blasting Fumes, Dust, and Fly Rock	The plan states: "The blaster will not give the "all-clear" until completely satisfied that the gases have dispersed, and that the area is safe approach." It is unclear how BMC plans to achieve this or how gas levels will be sampled.	Elaborate on the blasting process to make it clear how "all-clear" will be achieved and determined by appropriate personnel.
Appendix C: Section 9.7 Misfires	14.69 – 14.72 of the WHS Regulations must be followed when addressing any misfires.	BMC to acknowledge the comment with revised wording.
Appendix D: Section 3 – Cyanide Handling, Storage and Use	Engineering controls must be implemented to prevent workers from coming in direct contact with cyanide briquettes while mixing.	BMC to acknowledge the comment with revised wording.

Appendix D: Section 3 – Cyanide Handling, Storage and Use	The statement “During mixing the hood and ventilation equipment will operate under negative pressure so that any airborne NaCN dust cannot be released.” is not consistent with the requirements outlined in section 8 of the Workplace Health Regulations, specifically items 1 through 4.	BMC to Update the plan to reflect the requirements outlined in section 8 of the WHS.
Appendix D: Section 4	The plan does not elaborate on the conditions set for health and safety within the process plant control room. It must be adequately ventilated and under positive pressure. HCN levels will need to be monitored and the plan does not outline clear methods of monitoring such as personal badges or stationary devices, nor how the monitoring requirements are determined or justified.	Provide a discussion and additional details on the conditions of the process plant control room and HCN monitoring in the plant to ensure the health and safety of workers.
Appendix D: Section 6.1 – Emergency Response	Workers should never be exposed to HCN permissible levels outlined in Table 8 of the WHS Regulations. - “Process Plant or reagent mixing area HCN gas levels are above 10 ppm” Why has BMC chosen 10 ppm when ACGIH recommends 4.7 ppm.	BMC to clarify HCN levels for response according to appropriate guidance.

Sediment and Erosion Control Plan:

Document Reference	Comment	Required Action
Forward	A concordance table is missing from the plan	BMC is to provide a concordance table that demonstrates how all applicable decision document terms and conditions and proponent commitments have been addressed. This concordance table should also indicate where revisions have been made based upon the information requests outlined in this table.

Section 1: Item 1.2 Erosion and Sediment Control Reference Material	The Fisheries Act and CCME guidelines must be considered in the plan and are not mentioned in the reference material.	The Fisheries Act and CCME guidelines are to be referenced throughout document and included in section 1.2.
Section 2: Construction Monitoring Strategies	More clarification is needed on erosion and sediment control (ESC) measures required around water bodies after the construction phase where there is potential to have sediment enter the water (e.g., instream works for maintenance). The plan states that during mine construction water quality monitoring will take place until the activity near the water body is completed but should take place during all phases of mining whenever there is potential for erosion. The plan states monitoring during heavy rainfall events, but not spring freshet.	BMC to add details around ESC measures during all phases of the project including post construction. The plan should include monitoring during all seasons and activities, but especially spring freshet period.
Section 3: Erosion and Sediment Sources	Plan does not clearly consider all areas stripped of the protective vegetative layer as a source of erosion and sediment.	BMC to include consideration of all areas stripped of vegetation as sources for erosion and requiring sediment controls.
Section 4: Item 4.2.2 Operational Water Management Ponds	The plan states that the ponds are designed for a 1:200-year event.	BMC to ensure that water management ponds are designed to the class of the facility as laid out in YG's 2023 MWMFG document
Section 4: Typical design drawings	The Yukon Government has its own typical design drawings for erosion and sediment control measures like silt fence and slope stability etc. Department of Highways and Public Works issue these standards.	BMC to utilize Yukon design criteria and typical drawings as opposed to other jurisdictions standards where possible. Contact Department of Highways and Public Works at hpw-info@yukon.ca or 867-667-8820 to get the most up to date Yukon specific design criteria.

Section 4: Item 4.5 Progressive Reclamation	The plan states that <i>all vegetation and topsoil from disturbed areas will be stored in selected locations around the site (Figure 4-3)</i> . Figure 4.3 does not show a topsoil stockpile area.	BMC to clarify where the topsoil stockpiles will be, and any specific ESC measures for the lifespan of this stockpile
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Spill Contingency Plan:

Document Reference	Comment	Required Action
Forward	A concordance table is missing from the plan	BMC is to provide a concordance table that demonstrates how all applicable decision document terms and conditions and proponent commitments have been addressed. This concordance table should also indicate where revisions have been made based upon the information requests outlined in this table.
Section 3.2: spill classification	The duty to mitigate and remediate is not tied to reportable quantities. There is sometimes a misconception that if a spill is below the reportable quantity that no further action is required. This is incorrect, as per the CSR, any spill of a contaminant must be remediated, even if it's below reportable quantities. An example of this potential misinterpretation is in Figure 3-1. The flow chart directs the reader to: "determine if spill is reportable" -> "no" -> "internal investigation and correct action". This process is incorrect as presented. The workflow should include an additional step, specifically, "remediate spill area".	Add section, sub-section, or paragraph (as appropriate) to acknowledge that remediation will be completed regardless of whether a spill is of reportable quantity.

Section 3: Item 3.5 - Clean-up Procedures	The spill response procedures do not include any specifics regarding remediation, nor reference to the contaminated sites regulations or protocols (for example: "Protocol No. 3 - Soil Sampling Procedures at Contaminated Sites" and CSR "Protocol 5 - Petroleum Hydrocarbon Analytical Methods and Standards"). There is no specific direction regarding confirmatory sampling and reporting nor that it must be done in accordance with CSR and all relevant protocols.	Include specifics regarding remediation and reference the contaminated site regulations and protocols in the spill response procedures. Standard Operating Procedures appended to the plan would also support this request.
Section 3: Item 3.5 - Clean-up Procedures	The plan states "The Site Environmental Department will determine when all contaminated material has been adequately removed" in regard to spill in both soil and water. It is true that the site environmental department is responsible for direction of remedial strategy/extent. However, final determination of completion of remediation will be made by Environmental Protection and Assessment Branch, following the review of a submitted remedial report. There is no reference to report submission to Yukon Government, or any other process beyond the internal department.	Adjust language to ensure the final determination of completion of remediation will be made by Environmental Protection and Assessment Branch, following review of a submitted remedial report to appropriate governing bodies.
Section 4: Item 4.2 - External Reporting	It is a requirement within the Workers' Safety and Compensation Act that a major release of a hazardous substance must be reported to the Workers' Safety and Compensation Board. (Part 3, Section 57 of Workers' Safety and Compensation Act)	BMC to acknowledge the comment with revised wording.