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Your reference	Our reference	Date
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Dear Reinett,

Note on Legality of Proposed Exclusion of Pollution Control Dam - United Manganese Kalahari Proprietary Limited

1. Instructions

1.1 United Manganese Kalahari Proprietary Limited ("**UMK**") owns and operates an opencast manganese mine located near the town of Hotazel in the Northern Cape province ("**UMK Mine**"). The UMK mine consists of open pit mining sections, crushing and screening operations, run of mine, stockpiles, waste rock and product stockpiles, and associated support and administrative infrastructure.

1.2 UMK intends to implement a UKM Mine expansion project ("**Mine Expansion Project**") which entails the construction of new infrastructure including 4 additional Waste Rock Dumps ("**New WRDs**"). SLR Consulting (Africa) Proprietary Limited ("**SLR**") has been appointed to undertake the Environmental Impact Assessment for the Mine Expansion Project, which is currently in the scoping phase.

1.3 The findings of a Geochemistry, Waste Assessment and Source Term Report compiled for UMK by SLR and dated June 2017 ("**Waste Assessment Report**"), indicate that the UMK mine's existing WRDs are classified as non-hazardous in terms

of GNR 634 of 23 August 2013. The Waste Assessment Report further confirms that there is no acid forming material present in the WRD material.[1]

1.4 UMK therefore intends to exclude the construction of a New PCD to manage runoff emanating from the New WRDs, from the scope of the Mine Expansion Project. It is proposed that the New WRD runoff will be managed as non-hazardous water and discharged into the environment.

1.5 Furthermore, the UMK Mine's approved Environmental Management Programme currently authorises complete backfilling of all open pits using material from the UMK Mine's waste rock dumps. UMK therefore intends to concurrently backfill using waste rock material from the New WRDs (in-pit dumping), to further motivate for the exclusion of the New PCD from the scope of the Mine Expansion Project.

1.6 This note assesses the legality of UMK's proposed exclusion of the New PCD to manage runoff from the New WRDs and considers whether UMK must obtain 'an exemption' from the Department of Water and Sanitation ("**DWS**") in respect of the proposed New PCD exclusion.

2. Legal opinion

2.1 Pollution Control Dams ("**PCDs**") are typically constructed at a mine to capture and retain dirty water that cannot be discharged to the environment or a natural water resource due to water quality constraints. PCDs are therefore designed to manage dirty water through either recycling, reuse, evaporation, treatment and or authorised discharge.

2.2 A practical example of where a PCD is required is a coal mine where this infrastructure is typically constructed to manage contaminated water or runoff from coal discard dumps. This runoff constitutes 'dirty water' and must be captured, retained, and managed within the mine water management systems which typically include PCD infrastructure.

2.3 We understand that runoff from the existing WRD's at UMK Mine is currently managed in accordance with GNR 704 of 4 June 1999 ("**GNR 704**"), using berms constructed along the outer edge of the WRDs to catch rolling material and contain overflow of water from WRDs. The existing PCDs at the UMK Mine are located close to the product stockpile areas and are used to capture stormwater overflowing from these areas. UMK has confirmed that DWS has not raised any concerns in respect of the UMK Mine's current water management strategy.

2.4 This approach aligns with the guidance provided in the Best Practice Guideline A5: Water Management for Surface Mines, published by the former Department of Water Affairs and Forestry ("**DWAF**"), which states as follows[2], '*structures such as diversion berms, channels and pollution control dams are the typical methods used to manage runoff. The berms and channels are used to isolate the dirty areas so as to prevent the runoff from clean areas from entering the dirty areas, and to ensure the that dirty runoff enters the pollution control dam(s)*'.

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2.5 The findings of the Waste Assessment Report conclude that the material samples from the WRDs at the UMK Mine are classified as non-hazardous and do not consist of acid forming material. Therefore, based on these findings, the runoff from the WRDs (and the New WRD – which consists of similar material) constitutes non-hazardous water, which does not require containment and management in a PCD.

2.6 This approach aligns with the Best Practice Guideline A2: Water Management for Mine Residue Deposits also published by DWAF, which provides that a mine's waste residue must be subjected to a screening level hazard assessment to determine whether there is a potential water quality hazard associated with that residue. If the assessment concludes no potential water quality hazard exists, then the reside can be managed in a responsible manner to address erosion, freeboard, stability, and other non-water quality issues.[3]

2.7 This aligns with UMK's current WRD runoff management strategy, in terms of which non-hazardous run-off, from the existing WRDs is managed using berms to collect, contain and manage this runoff, in compliance with GNR 704. [**Note**: The management of WRD runoff using berms does not constitute a regulated water use in terms of which a water use licence is required under the National Water Act 36 of 1998 ("**NWA**")].

2.8 It is our legal opinion that a similar approach can be implemented to manage runoff from the New WRDs and therefore UMK is not legally obligated to construct a New PCD to manage runoff originating from the proposed New WRDs.

3. **Is an exemption in terms of GNR 704 required?**

3.1 Regulation 3 of GNR 704 makes provision for an exemption from the application of these regulations, subject to the Minister of Water and Sanitation's approval.

3.2 UMK must manage the runoff from the New WRDs in accordance with GNR 704, in terms of which water management at the UMK Mine is currently regulated. Consequently, the stormwater management system developed to manage runoff from the New WRDs must be designed, implemented, and managed in accordance with GNR 704. If compliance with GNR 704 is not possible, an exemption from the application of GNR 704 will need to be obtained.

3.3 Furthermore, runoff from the new WRDs must be managed in accordance with the statutory duties of care applicable in terms of the National Environmental Management Act 107 of 1998 and the NWA.

4. Please let us know if you would like to discuss.

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