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August 8, 2023

Mr. Robert Grosvenor
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Mr. Craig Jones
MEPA Coordinator
DEQ, Director's Office
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Helena, MT 59620-0901
crajones@mt.gov

RE: Stillwater Mining Company's Comments to the Joint Draft Environmental Impact Statement for East Boulder Mine Amendment 004 (June 2023)

Dear Mr. Grosvenor and Mr. Jones:

Stillwater Mining Company (SMC) welcomes the opportunity to provide our comments to the U.S. Forest Service's (USFS) and Montana Department of Environmental Quality's (DEQ) joint Draft Environmental Impact Statement (DEIS) for SMC's East Boulder Mine Plan of Operations and Operating Permit Amendment 004. SMC is the owner and operator of the East Boulder Mine. Prior to and since commencing commercial production in 2002, SMC has planned and operated EBM in a safe and responsible manner and has worked diligently in preparing Amendment 004 with local stakeholders including the Good Neighbor Agreement (GNA) Councils. Amendment 004, the DEIS's Proposed Action, is the culmination of years of methodical study and careful planning and represents a continuation of safe and responsible mineral development that is consistent with state and federal laws applicable to resource development in Montana and the Custer Gallatin National Forest (CGNF).

The Proposed Action would allow SMC to construct and operate the Lewis Gulch Tailings Storage Facility (LGTSF) and the Dry Fork Waste Rock Storage Area (WRSA) on private and federal lands. Construction of these facilities would expand SMC's operations at the EBM to continue developing and mining platinum and palladium deposits from the J-M Reef. In doing so, SMC is committed to using the best available technologies and practices to ensure safety and environmental stewardship. To this end, SMC has dedicated years of study and analysis to the preparation of Amendment 004 and has engaged in a transparent planning process with local stakeholders through the GNA. The Proposed Action represents the best available technology based on site-specific conditions, public health and safety, and environmental factors. Indeed, SMC's Independent Tailings Review Board recently concluded that the proposed LGTSF "is designed to minimize risks to people and the environment through the tailings facility

lifecycle" and satisfies all criteria of Requirement 3.2 of the Global Industry Standard for Tailings Management (see **Appendix A**). Using best practices, Amendment 004 will allow SMC to continue responsible development of critical minerals that safeguard our national security and contribute significantly to our economy at a local, state, and federal level.

SMC commends USFS and DEQ for a professional and thorough environmental review process that has resulted in a high-quality DEIS that carefully evaluates the impacts of the Proposed Action and all reasonable alternatives. SMC's comments are intended to inform USFS's and DEQ's preparation of a Final Environmental Impact Statement. SMC has identified several overarching comments that are discussed in the sections below. In addition, specific comments are provided in tabular format organized by section, page, and paragraph to allow the agencies to efficiently address and respond to each comment (see **Appendix B**).

I. The Vital Role of Critical Minerals, Including Platinum and Palladium

The DEIS recognizes that the Proposed Action and Alternative 3 have numerous federal, state, and local benefits, including the continued production of minerals critical to the U.S. economy and national security. We recommend further elaborating on the national priority and vital importance of critical minerals, including the Platinum Group Metals (PGM) palladium and platinum which are extracted at EBM, in the benefits (1.2.3) and socioeconomic impacts (3.15) sections.

Critical minerals are essential to our modern way of life. Federal policy has been adopted for securing a reliable domestic source of critical minerals in order to reduce the disruptions in supply chains. Congress recently recognized the vital role that critical minerals play, finding that "critical minerals are fundamental to the economy, competitiveness, and security of the United States." 30 U.S.C. § 1607(b)(1) (Infrastructure Investment and Jobs Act). With respect to critical mineral production on Federal land, and as relevant here, Congress instructed USFS to complete federal permitting and review processes with "maximum efficiency and effectiveness." 30 U.S.C. § 1607(c).

By definition, critical minerals constitute an essential supply chain, which is vulnerable to disruption. Even small failures in critical mineral production can impact the nation's security, jobs, families, and communities. Critical minerals are essential in manufacturing products, and their absence "would have significant consequences for the economic or national security of the United States." 30 U.S.C. § 1606(c)(4)(A)(iii). The Biden Administration released a supply chain assessment that found the U.S.'s over-reliance on foreign sources and adversarial nations for critical minerals poses a national and economic security threat. As one example, China recently set export restrictions on two critical minerals that could have significant implications to the U.S. technology industry and U.S. military. Here, the ore deposit being mined at EBM is the most significant source of PGMs in the United States and is the highest grade PGM deposit in the world. The other leading producers of these minerals are Russia and South Africa. Russia alone produces two-fifths of the global palladium supply, and over one-third of 2021 U.S. imports were sourced from Russia. Absent Amendment 004, the U.S. may have to rely more heavily on foreign nations, including Russia, to meet its critical mineral needs. As such, the DEIS

should further emphasize the benefits of continued PGM production at EBM and the potential economic and security impacts to disruption of a reliable U.S.-sourced PGM supply chain. Enclosed herewith as **Appendix C** is additional information for the agencies to consider relative to critical minerals.

II. The DEIS Identifies and Considers all Reasonable Alternatives

The DEIS identifies and gives full and meaningful consideration to all reasonable alternatives, and it appropriately dismisses technically and economically infeasible alternatives from detailed analysis. USFS and DEQ gave careful consideration to including an alternative that would require SMC to design and construct a filtered tailings storage facility (FTSF) to meet its tailings storage needs but concluded, for numerous reasons, that it was not a reasonable alternative and dismissed it from detailed analysis in the DEIS. USFS has provided for public review a detailed memorandum setting forth its reasoned analysis for dismissing the FTSF alternative, in which it independently reviews reliable existing data, reports, and resources. SMC supports this analysis and the decision to dismiss a FTSF alternative from detailed review.

SMC is committed to using the best available technologies and practices to ensure safety and environmental stewardship and has investigated and studied the technical feasibility of a FTSF at EBM for the last two decades. SMC has completed FTSF studies both internally and in cooperation with the GNA Councils. Specifically, the GNA established a Responsible Mining Practices and Technology Committee (Technology Committee) made up of representatives from the company and the local conservation groups who are tasked with reviewing new technologies including tailings and waste management. The Technology Committee is committed to investigate filtered tailings and other tailings and waste technologies into the future. However, as the DEIS and USFS memorandum conclude, studies conducted to date have not established the feasibility of producing a geotechnically stable filtered tailings product at EBM that can be transported and placed in a FTSF that will remain stable and result in reduction of environmental risk. As such, the FTSF alternative was appropriately dismissed.

Further to this point, SMC's consultant, Knight Piésold Ltd., recently completed a geotechnical assessment of filtered tailings from the EBM. The final report is attached hereto as **Appendix D**. The objective of Knight Piésold's work was to conduct test work and analysis to determine whether the moisture content of the filter cake is acceptable for material placement for purposes of constructing a FTSF at EBM. The report found that "the overall moisture content expected from the filter pressing process will be too high for reliable placement and compaction of filtered tailings." Even the driest possible filtered tailings at EBM would exceed the optimum moisture content for reliable compaction and stacking. Based on the test work and analysis conducted, Knight Piésold concluded that "a FTSF is not yet considered to be a viable option for short term tailings storage at the EBM based on inadequate capability to consistently produce a suitably dewatered filtered tailings material[.]" We encourage the USFS and DEQ to review Knight Piésold's report and, as warranted, incorporate its findings and conclusions into its analysis.

III. No Likely Significant Adverse Impacts Identified

The DEIS does not identify any likely significant adverse impacts to environmental resources resulting from Amendment 004. SMC agrees with these findings and commends USFS and DEQ on a thorough evaluation of potential impacts on important resources of the natural and human environment. SMC has safely operated the EBM and the existing tailings storage facility for more than two decades. The goals of Amendment 004 are to use best available technology to construct a tailings storage facility and waste rock storage area that maximize the use of existing infrastructure, minimize new disturbances to federal lands, and provide protections for the environment and human health and safety. The reclamation and closure plan further ensures that SMC's long-term commitment to environmental stewardship well after mineral extraction has concluded.

IV. Alternative 1 – No Action Alternative and Cessation of Mining

Under Alternative 1, the DEIS correctly notes that the approved Operating Permit No. 00149 and the Plan of Operations would allow for sufficient waste rock storage through 2025 and tailings storage through 2030. However, the DEIS assumes that operations at EBM must "cease" in 2025 when waste rock storage is no longer available. This is partially correct. After using waste rock to complete the construction of the currently permitted Stage 6 lift of the EBM tailings storage facility, waste rock storage would no longer be available, but mineral production would continue at EBM until SMC exhausts available ore deposits. Steady state *development* of EBM would cease in the third quarter of 2025, based on current projections, but there would still be adequate tailings storage and SMC would continue steady state *production* through 2026. After 2026, production rates would be reduced by about one-third each year until 2029, when SMC exhausts the ore left to extract. We suggest the DEIS acknowledge that steady state development would cease in 2025 and clarify that production of minerals at EBM would continue until 2029 at varied production rates until all available ore is exhausted and operations cease.

V. Alternative 3 – Agency-modified Alternative

The DEIS includes Alternative 3, which is the agency-modified alternative that would incorporate geomorphic landform design and enhanced storm water channels. The agencies developed Alternative 3, in part, with the assistance of conceptual visual renderings from SMC's consultant, Knight Piésold. Specific designs have not yet been provided. If Alternative 3 were to be selected by the agency decision makers, the DEIS indicates that SMC would be required to submit, within 30 days of the Record of Decision, a revised Plan of Operations incorporating the Alternative 3 requirements, including detailed designs for the LGTSF and WRSA. This is a narrow window and SMC has reservations that its engineers can meet this target timeframe without more specificity given to the criteria to which SMC would be held.

Section 2.3.2 of the DEIS is titled "Required Design Criteria" and this section outlines general design objectives to be implemented under Alternative 3. This section does not, however, define the specific "design criteria" necessary for implementation of Alternative 3. We recommend referring to this section as "Required Design Objectives"

and suggest providing an addendum with more specific design criteria that SMC and its engineers can use to prepare updated designs for the LGTSF and WRSA. To provide a clear set of expectations and guidelines for implementation of Alternative 3, the design criteria should be specific, measurable, and achievable standards that SMC's consultants can utilize to provide updated designs for the LGTSF and WRSA in fulfillment of the objectives set forth in Section 2.3.2.

In light of these comments, SMC is committed to working with the agencies to develop design criteria for inclusion in the final EIS that implements the objectives of Alternative 3 and which would make complying with the 30-day requirement to prepare a revised Plan of Operations with detailed designs more realistic.

VI. Inconsistent Description of Closure and Post-Closure Period

Throughout the DEIS, technical memoranda, and specialist reports, there is a discrepancy in the closure and post-closure time period for the LGTSF and WRSA. These documents often assume a total of 15 years for the closure and post-closure phases and in other places, such as the Hydrology and Wetlands Specialist Report, it states "post-closure would last approximately 10 years for the Lewis Gulch TSF and 15 years for the Dry Fork WRSA." However, as set forth in the EBM Closure Plan for the LGTSF and WRSA, the closure and post-closure phases are anticipated to last up to 25 years. As set forth in Table D.1 and Table D.2 of the proposed EBM Closure Plan, the closure phase is anticipated to last up to 15 years for the LGTSF and WRSA. The post-closure phase is anticipated to last up to approximately 10 years following the closure phase. Both phases (closure/post-closure) are to be reassessed at five-year intervals. SMC recommends maintaining consistency between the DEIS and EBM Closure Plan when referring to the anticipated closure and post-closure timeframes.

VII. Long-Term Care and Maintenance Bond

With respect to all three alternatives evaluated, the DEIS states that CGNF would determine the scope, frequency, and cost of long-term care and maintenance beyond the obligations of the joint bond held by DEQ and CGNF for reclamation. CGNF does not provide authority for requiring additional bond requirements separate and distinct from the joint reclamation bond held for mine operations and closures in an amount to be determined unilaterally by CGNF. Haley & Aldrich, in Tech Memo 2, suggests that CGNF has unilateral power to implement such a requirement based on 36 C.F.R. § 228.8 and Montana Code Annotated § 82-4-336(9)(a). A review of these authorities does not appear to reflect or support the description included in the DEIS. SMC suggests a more precise description of any long-term care and maintenance procedures be provided that more accurately describe the source of authority and procedure to be followed in the event any long-term care and maintenance needs arise beyond that contemplated and provided for in SMC's Closure and Reclamation Plan.

VIII. Distinguish New Surface Disturbance Between Private and Federal Land and When Occurring in Previously Disturbed Areas

The DEIS frequently refers to the acreage of new surface disturbance areas associated with the Proposed Action and Alternative 3, but it rarely identifies whether the new disturbance is on private or federal land. Failure to clearly distinguish between private and public land disturbances may lead the reader to believe that all new disturbance will occur on federal lands. This is incorrect. Regarding the proposed WRSA, a majority (57.7 acres) of new disturbance will occur on private land owned by SMC, as opposed to 44.2 acres of federal land. Additionally, in relation to the proposed LGTSF, a significant portion of the facility will be constructed in already disturbed areas on federal land. To better inform the reader, in relevant areas throughout the DEIS, we suggest clarifying when surface disturbance will be on private versus federal land, and the proportions of which new surface disturbance will occur in previously disturbed areas.

IX. Reference to Production Rate Limits

The DEIS states that under Amendment 004 the EBM production rate limits would be removed and the new limit would be based on a steady-state level of 600 employees and the production limits in Montana Air Quality Permit (MAQP) No. 2652-07: 1,095,00 tons of ore production, 1,095,000 tons of waste rock handling, 1,095,000 tons of ore crushing, and 132,000 tons of borrow crushing on a rolling 12-month basis. While the production rates set forth in the MAQP apply to operations at the EBM, the DEIS should clarify that these are the *current* production rate limits and they are subject to change pursuant to state law. Similarly, reference to the steady-state level of 600 employees is based on the original design report for potable water and the septic system at the EBM, and is subject to revision. While SMC has no present plans to amend or revise its water and septic systems or the limits established in its air quality permit, the DEIS should clarify that these standards are not being expressly incorporated into Operating Permit No. 00149 or the Plan of Operations but are referred to in the DEIS for the purpose of analysis based on existing, independent permit criteria.

X. Requirements of the Good Neighbor Agreement

References in the DEIS to the current requirements of the GNA are helpful to inform the reader on the current conditions related to traffic and other factors considered by the agencies. Given the number and length of GNA references throughout the DEIS, including a summary paragraph in the regulatory framework section, SMC recommends that the agencies clarify that the terms of the GNA and their practical application are meant to inform the reader about the status quo and are not considered additional permit requirements. The GNA terms provide a baseline to evaluate current traffic trends. To better inform the reader, it would be helpful to clarify that the agencies have determined that the proposed action would not result in a change in traffic volume, and to move the current subsection 1.4.3 to a new standalone section, entitled "Section 1.6. Private Agreements." The current Chapter 1 structure creates ambiguity in the role of the GNA when included as a subsection of the regulatory framework.

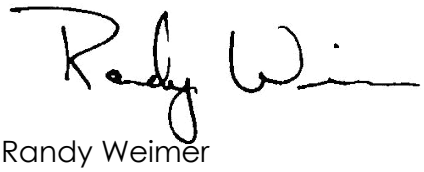
XI. Clarification Regarding Management of LGTSF Process Water and MPDES Permitting

SMC is committed to managing mine water effluent and to ensure that water quality remains compliant with applicable standards. The description found in the Water Management section discussing the Proposed Action, Section 2.2.3 of the DEIS, indicates that SMC would submit an application to modify its MPDES permit coverage and that "any change in effluent quality would be subject to nondegredation review." SMC suggests that a more precise explanation of the water management process anticipated for the Proposed Action would help the reader better understand the proposed process, and particularly that a MPDES permit amendment would only be sought if it was deemed necessary in the future (see comment in **Appendix B**). As proposed, the water management plan would not require the referenced amendment, nor would a change in effluent quality be subject to nondegredation review. Nondegredation criteria are included in the MPDES effluent limits. Changes that may occur in effluent quality, if within the effluent limit, would not impact the MPDES permit.

Conclusion

With attention to the issues raised in this letter (and the enclosures) and other public comments, USFS and DEQ are well-positioned to produce a thorough Final Environmental Impact Statement and Record of Decision. SMC looks forward to completion of this environmental review process and the continued operation of the EBM. If you have any questions regarding the comments raised in this letter and the attached materials, please feel free to contact me at (406) 321-0015, or Jen Lane at (406) 980-0445.

Sincerely,



Randy Weimer
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Enclosures:
Appendix A. Independent Review Panel Report Review – *Lewis Gulch Tailings: GISTM Requirement 3.2* (dated July 11, 2023)
Appendix B. Detailed SMC Comments in Tabular Format
Appendix C. Critical Minerals Resources and Information
Appendix D. Knight Piésold Ltd. Geotechnical Characterization of Filtered Fine Tailings