

October 2, 2020

Mr. Garrett Smith
Department of Environmental Quality
Environmental Management Bureau
P.O. Box 200901
Helena, MT 59620-0901

RE: Montana Resources, LLP Responses to DEQ Preliminary 5-Year Bond Determination Comments and Requests for Additional Information

Dear Mr. Smith:

Montana Resources is providing the following responses, accompanied by an attached map and acreage table, to “Attachment 2-Request for Additional Information” and “Attachment 3-Acreage Accounting Review Memo” in DEQ’s August 5, 2020 letter regarding the Continental Mine Preliminary 5-Year Bond Determination. Responses also reflect discussions between MR, DEQ, Knight-Piesold and WESTECH Environmental on September 16, 23, and 30, 2020 that were clarified and summarized in emails from Garrett Smith dated September 24 and 30, 2020. Responses are organized numerically by DEQ correspondence to reflect their requests and comments.

DEQ August 5, 2020 Letter “Montana Resources, LLP (Operating Permits 00030, 00030A, 00041, 00108) Preliminary 5-Year Bond Determination”

Disturbance Acres:

- 1)** Draft versions of a map (“Projected 2025 Disturbance Areas”) depicting site conditions and disturbance areas specific to the period 2020-2025 were submitted to DEQ September 18 and 30, 2020 for review and comment. The map presented herein was revised per follow-up discussions with DEQ and clarification provided in Garrett Smith’s September 24 and 30, 2020 emails. This map is intended to supersede all previously submitted disturbance maps, including Plate II of MR’s 2019 Annual Report cited in DEQ’s August 5, 2020 letter. The map is presented on a topographic base, Permit Area boundaries are displayed, and Disturbance Features are color-coded (color-coding also includes slope and crest categories). Amendment 10 disturbance areas similarly include the incremental expansion of the Yankee Doodle Tailings Impoundment (YDTI) impoundment, embankment, and associated facilities for the 2020-2025 period. The YDTI embankment is depicted on the map as three segments (N-S, E-W and West).

The map is accompanied by an acreage table. The acreage table is organized alphabetically by disturbance Feature and presented for each Permit Area (Nos. 00030, 00030A, 00041, and 00108). Areas designated as “Exempt” (Pre-1971 disturbances including the Precipitation Plant, Concentrator, and Primary Crusher); “BMFOU” (Butte Mine Flooding Operable Unit areas under EPA authority through Superfund); and “GMMIA” (Granite Mountain Memorial Interpretive Area which preserves post-mining land use for historic preservation) are labeled as such by Feature and included within the appropriate Permit Area.

The Miscellaneous category acreage has been reduced by one-half of that previously presented in Plate II by delineating additional Features. Remaining acreage in Miscellaneous include minor roads, unnamed areas between Features, and other unclassified disturbances. MR proposed using a slope acreage adjustment for bonding the Miscellaneous category that is based on an estimated 50 percent of the area with level/gentle slopes between 0 and 20 percent (factor of 1.0); and 50 percent based on an average of slopes from 20-40 percent (factor of 1.0525).

- 2) Please see responses in No. 1 above regarding Features within the Miscellaneous category. Slope categories are color-coded on the attached map.
- 3) The North Rock Disposal Site (RDS) is not proposed to be constructed in the 2020-2025 timeframe; waste rock will instead be utilized to build the YDTI Embankment and Ramp, as shown on the attached map. Also shown on the map is the adjacent Leach Pad, which is depicted as it will appear in 2025.

The Great Northern RDS and associated Leach Pad and adjacent Road and Miscellaneous disturbances are shown on the attached map as they will appear in 2025.

All RDS have been identified on the map; this Feature is further subdivided into slope/crest and labeled by named RDS on the map and attached acreage table.

Bonding Categories and Permit History:

- 4) The attached map and acreage table present the portions of Permit No. 00030 (as well as Permit Nos. 00030A, 00041, and 00108) that occur within each Feature category. In addition, as discussed in Response No. 1 above, Exempt, BMFOU and GMMIA acreages are specified on the acreage table by Feature and included within the appropriate Permit Area. Undisturbed areas are depicted on the map in pale green and presented in the acreage table under the indicated Permit Area.

Naming conventions and bonding levels of certain historic Features were discussed in Attachment 3 "Acreage Accounting Review Memo" prepared by Garrett Smith (dated 3/18/2019 and updated 2/28/2020). These items were also discussed in conference calls conducted September 16, 23, and 30, 2020. Based on mutual agreement between the parties, the following was determined:

- "Pre-1971" areas (based on the year that the Montana Metal Mine Reclamation Act-MMRA- took effect) include processing facilities that are referred to as "Exempt" on the map and acreage table. These facilities are bonded at \$0/acre and include the Concentrator and partially reclaimed areas; the Precipitation Plant; and the Primary Crusher and partially reclaimed areas. Inclusion of the Primary Crusher as an Exempt facility is presented in more detail below. The Pre-1971 designation does not include Powder Magazines and Explosive Storage Areas, the Railroad to the Precipitation Plant, Reclaim Central Water Tower and Water Management structures, or roads associated with these facilities.
- "Pre-1974" areas (based on the year that Amendments to the MMRA took effect) include all disturbed lands within Permit Area 00030, exclusive of Exempt, BMFOU and GMMIA facilities; these areas are bonded at \$500/acre. Although it also passes through

Permit Area 00030A, the ground underneath the Railroad to the Precipitation Plant would be bonded at \$500/acre per DEQ recommendation.

- BMFOU areas include the Berkeley Pit, Berkeley Pit water, Horseshoe Bend Water Treatment Plant, and the Continental Pit below 5410 feet elevation (NGVD 29). As stated earlier, these areas are under EPA's authority under Superfund, therefore they are bonded at \$0/acre.
- The GMMIA area Permit Boundary Adjustment Permit Revision 20-001 incorporated 17 acres into Permit Area 00030 to include the Horseshoe Bend Capture System booster pump station and associated infrastructure. DEQ determined that since this area is within the GMMIA, it would be appropriate for reclamation to match the post-mining land use of historic preservation, thus, additional bond would not currently be required. Also, decommissioning of the booster pump station and related infrastructure would be under EPA's jurisdiction within the BMFOU.

5) Please see previous response regarding the resolution of questions related to historic features and bonding levels.

Garret Smith September 24, 2020 E-mail "MR Bond Review 9/23 Notes"

- Bullet One:

Undisturbed acres are shown on the attached map in pale green and enumerated under the appropriate Permit Area in the acreage table. No bond amount is ascribed to this category

- Bullet Two:

The small area of road disturbance under Exploration License #00711 that is outside the Operating Permit boundary has been delineated on the map per DEQ's request; it has not been added to the acreage table.

- Bullet Three:

Post-Closure Spillway: An updated 2025 post-closure spillway configuration was developed by Knight Piésold Ltd. (KP) to facilitate the determination of the spillway construction cost estimate for the 2020 5-Year Bond Review (KP, 2020). This information was submitted to DEQ by KP on September 22, 2020. The post-closure YDTI spillway provides a water management system for preventing overtopping of the embankment, but it also serves to prevent pooling of water adjacent to the embankment and thereby preventing any uncontrolled ingress of water into the embankment. The spillway alignment passes around the northern end of the N-S Embankment and will be cut into bedrock. The spillway length is approximately 2,500 ft and the total flow length between the intake and the discharge into the Continental Pit is approximately 13,000 ft. The spillway concept developed considers the YDTI tailings beach configuration in Year 2025. Detailed design of the spillway configuration and alignment may only be undertaken once the facility closure is imminent and specific details of the YDTI closure conditions (pond and beach) are available.

(Reference: Knight Piesold Ltd. (KP), 2020. 5-Year Bond Review: Updated Closure Spillway Conceptual Configuration. September 22. Ref. No. VA20-01723.)

Primary Crusher: In Attachment 2 to DEQ's August 5, 2020 letter, Garrett Smith raised the question about whether the Primary Crusher was, or was not, a Pre-1971 processing facility based on information contained in MR's 1998 Reclamation Plan. MR was able to obtain an aerial photo dated September 15, 1970 showing the Primary Crusher Area. A side-by-side comparison of that photo and a 2020 aerial photo of the Primary Crusher is presented in a figure attached to this letter. DEQ has reviewed this information and concurs with MR that the Primary Crusher is exempt from bonding.

Garrett Smith September 30, 2020 E-Mail "MR- 9/30 Bond Discussion"

- 1)** The YDTI Pond would be 365 acres. This acreage is noted on the map; however, it has not been added to the Excel table to avoid duplicating acreages.

The YDTI Pond presented on the "Projected 2025 Disturbance Areas" map is 2,000 ac-ft. The YDTI water balance model presented with the Amendment 10 Application, identified this volume as the unusually wet (95% percentile) post-closure pond once the pond has reached a 'steady-state' condition.

The tailings beach surface modelled for the "Projected 2025 Disturbance Areas" map assumed an operating pond of 15,000 ac-ft, which would cover a total of 365 acres in 2025. The 15,000 ac-ft pond-beach interface/elevation in 2025 is delineated on the map, but the acreage has not been added to the Excel table to avoid duplication. The beach area between the 2025 15,000 ac-ft operating pond elevation and the post-closure steady-state pond is the transition zone, which will be progressively reclaimed in five-year post-closure time steps as the pond recedes.

A 15,000 ac-ft operating pond was selected for the 2025 model based on the estimated pond volume reduction that will occur as a result of the Berkeley Pit Pilot Project. The Pilot Project is designed to facilitate the discharge of up to 10 MGD from site and has achieved an approximate net deficit of 2.4 MGD from the YDTI pond through one year of operation. Based upon extrapolating this deficit, as well as a conservative loss, the pond volume is estimated to reach the target operating volume of 15,000 ac-ft in Q4 2024 or Q1 2025.

- 2)** Map and table recommendations:

YDTI Embankment Crest Road: The map and acreage table have been updated to include a 50-foot wide road around the crest of the Embankment.

GMMIA Permit Area: The map and acreage table have been revised to show the GMMIA as part of Permit 00030.

HSB Water Treatment Plant: This facility has been correctly labeled as a BMFOU feature on the acreage table.

- 3)** Details Regarding Individual Features in Miscellaneous:

Mine Office: The Mine Office will continue to be bonded at \$500/acre under Permit Area 00030.

Berkeley Pit Overlook: The Overlook will continue to be bonded at \$500/acre under Permit Area 00030. MR will submit a minor permit revision in the future to delete this property which it does not own.

McQueen Townsite: MR concurs that revegetation bond is appropriate for this property under Permits 00030 and 00030A pending potential future disturbance.

Alluvium and Soil Stockpiles: MR agrees that reclamation of stockpile footprints would not require grading and soil placement. MR concurs that revegetation bond is appropriate for these areas.

Roads: MR concurs that road acreage would be reduced 50% through reclamation to provide access routes across the site during reclamation and post-closure.

Additional MR Comment Re; Item 9 A&E Post Closure Management

MR would appreciate DEQ's clarification of the following costs presented in Item 9:

- Administrative Aide: The staffing schedule for the Post Closure seems high. Would a full-time administrative aide be necessary (in addition to a half-time Site Manager) for a period of 17 years?
- Electrical Cost per Year: Is \$20,000 per year for electrical costs fair and reasonable?
- Analytical Costs per Year: Are the analytical costs presented in Item 9 duplicated in any way with analytical costs presented in Item 6, Task 2 "Long Term Monitoring Sites per Year"?

The mapping and naming conventions resulting from the 5-Year Bond Determination and presented in this letter will be incorporated into future Annual Reports and the upcoming revision to MR's Operations Plan.

We will be happy to address any questions you may have.

Sincerely,



Jeremy Fleege



 **Montana Resources**
Continental Mine

Primary Crusher
09/15/1970 and 2020

 **WESTECH**
ENVIRONMENTAL

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