



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

March 13, 2024

Ms. Lori Smith
Cripple Creek & Victor Gold Mining Company
P.O. Box 191
Victor, CO 80860

RE: Division Adequacy Review No. 3; Technical Revision 141 (TR-141) Grassy Valley Monitoring Well Installation – Phase 1, Permit No. M-1980-244

Dear Ms. Smith,

On February 29, 2024, the Division of Reclamation, Mining and Safety (Division/DRMS) received your responses to the Division's Adequacy Review No. 2 letter, dated February 22, 2024, for Technical Revision 141 (TR-141). After review of the submission the Division has the following list of items that need to be addressed by the Operator.

1. In response to item 1 the Operator states the results of the Golder report (Report on East Cresson Overburden Storage Area Acid Rock Drainage Sustainable Solutions Evaluations; Cripple Creek & Victor Mine, January 2023) on the field investigations, performed in August 2022, do not conclusively indicate a preferred flow path of seepage between the ECOSA and GVMW-25 or other Grassy Valley monitoring wells. However, the report does indicate several low resistivity features that could be an unmapped utility or could represent preferential flow path(s) for high TDS groundwater. High TDS groundwater is linked to contaminated groundwater. The report goes on to recommend the installation of three nested groundwater monitoring well pairs to better characterize the subsurface conditions and possibly intercept degraded quality water.

One well pair, PB23-03, is located ~1,700 feet NW of GVMW-25 and ~700 feet NW of the proposed GVMW-28 location. PB23-03 would be in an area where there is a gap in the current groundwater monitoring network.

The two other well pairs, PB23-01 and PB23-02, are located downgradient of GVMW-25 between it and the point of compliance wells GVMW-26A/B. This area is also a gap in the current groundwater monitoring network.

The Division agrees with the Golder report that the installation of these three nested groundwater monitoring well pairs to better characterize the subsurface conditions are needed. Please provide



design details and an installation schedule for these additional wells to be included as a part of TR-141.

The Division notes the Operator received the Golder report in January 2023 and the report was not voluntarily shared with the Division at that time. The Division first received a copy in February 2024 in response to its TR-141 adequacy review questions.

2. In the Golder report, dated April 2022 (East Cresson Overburden Storage Area Acid Rock Drainage Sustainable Solutions Evaluations; Cripple Creek & Victor Mine Shallow Groundwater Investigation Work Plan), it is stated that it was submitted along with the design drawings for a seep collection trench along the toe of the ECOSA to help mitigate ARD drainage. The Operator states the primary reason for not installing the seep collection trench was the lack of groundwater encountered during the waterline replacement. The waterline replacement, along the toe of the ECOSA, was underway in November 2023. The Operator waited over a year to evaluate if the seep collection trench was feasible or not and only then because a waterline failed and had to be replaced. In the intervening time contamination within GVMW-25 has increased and impacts to the Grassy Valley hydrologic balance have continued unabated. A seep collection trench to mitigate ARD drainage from the toe of the ECOSA will be addressed through additional permitting actions, expected in mid-2024, and not through TR-141.
3. Please commit to providing an Addendum to TR-141, along with the requested Monitoring Well Drilling and Installation Report due 45 days after the last well is installed, updating any relevant sections (e.g., tables, figures) of the Grassy Valley QAPP.

This concludes the Division's Adequacy Review No. 3 of TR-141. The Division reserves the right to further supplement this document with additional items and/or details as necessary.

The decision date for your application is set for **March 15, 2024**.

If you need additional information or have any questions, please contact me by telephone at **303-866-3567 x8114**, or by email at patrick.lennberg@state.co.us.

Sincerely,



Patrick Lennberg
Environmental Protection Specialist

ec: Katie Blake, CC&V

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