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**DIVISION OF RECLAMATION
MINING AND SAFETY**

Mr. Michael Cunningham
Division of Reclamation, Mining and Safety -- Denver Office

June 21, 2017

Ms. Kelly Morgan
Division of Water Quality Control – CDPHE

RE: NOI FILE NO. P2016-020 (MD01)

Thank you to DRMS staff for your letter of June 19, 2017 which contained a detailed review of the NOI Amendment submitted May 23rd and noted deficiencies in the NOI, and for your site inspection yesterday. Based on our discussions during the site inspection MineWater would like to take the opportunity to make a clarification in writing of MineWater's position.

MineWater has observed that there are cross faults carrying water that are filled or partially filled with lime scale, sometimes called popcorn dolomite. It is our view that the effective diameter of a drilled well can be increased without drilling a larger diameter well by acidization of the pores and natural fractures surrounding the well. This is a localized modification of the rock matrix surrounding the well, within 25 feet of the well. It is not intended to be a large scale penetration further away than 25 feet. While we understand that there is likely to be anisotropic lime scale conditions surrounding a given newly constructed well, we are intending to use the lowest concentration acid possible to achieve the required result and to minimize the effect of the injection program.

A little background on skin effects for solution transport around a well is excerpted from a book for which I assisted in writing two chapters is enclosed as an appendix to this letter.

While we don't know if acid injection would be required, we would like to continue discussions with the appropriate regulatory authority to be able, if acceptable, to initiate acid injection if it were found to be needed, about 45 days after commencement of drilling the first well. It is likely that acid injection will not be needed, or if it is needed, that we won't need as much as we have conservatively estimated. The inhibitory effect of the lime scale decreases with the square of the distance from the well. The worst restriction on groundwater flow into the well is from the lime scale immediately next to the well. A similar unit of lime scale located twice the distance from the well would inhibit only 25% of the flow that the lime scale next to the well would cause.



MineWater

Therefore a very small acid injection effort will create a given flow benefit, and it would take 4 times more acid to create another equivalent unit of benefit. More specifically, while we want to consider an injection program of up to 38 tons of acid, we expect that the injection of only 9 tons would likely be sufficient and would generate the majority of the benefit achievable from a 38 ton injection program. Given the damage that excessive injection could pose on water quality, we will be very cautious and we intend to err on the side of too little in our use of acid injection even if all agencies determine it to be acceptable.

It is our intention, and our interpretation of the documents under which we are bound, that the use of hydrochloric acid for acidization of wells at the London Mine will only be conducted upon prior written approval by CDPHE as a modification of the Consent Order IC-160803-1.

Under Section 48 of the Consent Order MineWater is required to submit a quarterly progress report to CDPHE WQCD. That report is to outline activities taken in the previous quarter, and specify what activities will be undertaken within the next quarter to achieve compliance with the Consent Order. MineWater considers acid injection planning, design and implementation an "Activity" covered by this paragraph.

Furthermore, under Section 68 of the Consent Order, CDPHE is not precluded from "imposing additional requirements necessary to protect human health or the environment and to effectuate the purposes of the Consent Order." One of the purposes (or stated objectives) of the Consent Order in Section 12e is in furtherance of MineWater's seeking of "permits to undertake bona fide mining activity." MineWater is also bound by permit conditions that require our discharge to not contain acid at a pH of less than 6.5 S.U.

It is our view that the permit requires notice to CDPHE. Our permit CO-0038334 provides:

"Change in Discharge

The permittee shall notify the Division, in writing, of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged

The permittee shall give advance notice to the Division of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

Whenever notification of any planned physical alterations or additions to the permitted facility is required pursuant to this section, the permittee shall furnish the Division such plans and specifications which the Division deems reasonably necessary to evaluate the effect on the discharge, the stream, or ground water. If the Division finds that such new or altered discharge might be inconsistent with the conditions of the permit, the Division shall require a new or revised permit application and shall follow the procedures



specified in Sections 61.5 through 61.6, and 61.15 of the Colorado Discharge Permit System Regulations."

In summary, while we are providing DRMS with information in the NOI pertaining to the use of acid in the enhancement of wells constructed pursuant to the NOI, and we welcome your input on all aspects of our work program as proposed, we believe that we are presently regulated fully by CDPHE WQCD both under our Consent Order and under our discharge permit, and we interpret that condition to mean that we cannot inject any acid without CDPHE approval.

We are eager to proceed with any portions of the work in the NOI Amendment that you can approve, and to hold off on any portion of the work that you are uncomfortable with, or need to study further. We have reserved a driller (Hydro Resources) who is standing by to proceed and is at great cost to MineWater for such standby. We have also been informed by DWR that they do not believe that they need to give us a well permit if the well is constructed as part of a permitted activity under DRMS authorization. We will seek to get a well permit from DWR anyway to ensure our status under the Water Decree, but we are not going to wait for the start of drilling for receipt of that permit.

Our work season is short and we are hopeful to proceed soon. Thanks for your consideration, and all your help in review and suggestions for improvement of our planned program at the London Mine.

Sincerely,

MineWater Finance LLC

Joseph G. Harrington, President.

Copy: Steve Bain and Jim Noble, Welborn Sullivan Meck & Tooley