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October 18, 2022

Mr. Tim Cazier
Colorado Department of Reclamation and Mine Safety
1313 Sherman Street Room 215
Denver, CO 80203

Subject: M-2002-096 Red Creek Quarry Aka Ranch Land Rock Pit #1 Technical
Revision Submission

Dear Mr. Cazier:

This Technical Revision is submitted for the above referenced mine permit to revise the analytical suite of the surface and groundwater baseline study for an upcoming amendment application. During preparation for and execution of the first quarter sampling event, it became clear that valid and defensible data would not be collected for analytical parameters with extremely short hold times. In addition, some analytical parameters listed in the tables in California Code of Regulations (CCR) Regulation 41 Section 1 are appropriate for studies in industrialized and otherwise developed areas but are less suited to the above referenced mine permit setting.

Red Creek Quarry (RCQ) is located within the 32,000-acre Ranch Land ranch formerly known as the Clevenger Ranch. Ranch development includes two ranch houses with out-buildings, Rock Pit #2 sand and gravel quarry, cattle and stock tanks. The ranch is neither industrialized nor extensively developed. To that end, on behalf of Holcim, please accept the following justification for removal or modification of the analytical parameters listed below.

Total Coliforms (both 30-day average and maximum in 30 days): Coliform is an indicator organism for the potential presence of pathogenic microorganisms in drinking water sources. The presence of these intestinal tract organisms in drinking water would indicate the water source received contamination of an intestinal source. Whereas cattle graze the ranch, the ranching is extremely low density and cattle excrement is not in contact in one area that would cause groundwater contamination. A drinking water source is neither in the vicinity nor upgradient of the RCQ. *Holcim is requesting removal of these analytical parameters from the groundwater baseline study analytical suite.*

Asbestos: Whereas asbestos is a naturally occurring substance, it is most prevalent in asbestos containing construction materials. Neither development nor asbestos containing material disposal facilities are known to be located in the vicinity or upgradient of RCQ. *Holcim is requesting removal of this analytical parameter from the baseline study analytical suite.*

Cyanide: Cyanide is used in chemical processes such as fumigation, case hardening of iron and steel, electroplating and concentration of ores from gold-bearing mineralized rock. Cyanide is also present in a fertilizer known as nitrolime. Neither the

aforementioned chemical processes nor fertilized agriculture are known to be in the vicinity or upgradient of RCQ. *Holcim is requesting removal of this analytical parameter from the baseline study analytical suite.*

Nitrate and Nitrite: These individual analytical parameters are represented in the parameter Total Nitrate + Nitrite. In this case, the request is to accept the result for the combined analytical parameter rather than the individual parameters.

Chlorophenol: Chlorophenols are used as pesticides, herbicides and disinfectants. None of these substances are known to be used in the vicinity or upgradient of RCQ. *Holcim is requesting removal of this analytical parameter from the groundwater baseline study analytical suite.*

Color: Laboratory analysis for color requires a 48 hour hold time maximum and is subcontracted by the primary analytical laboratory. The result will always be noted as “received beyond hold time” and invalid. *Holcim is requesting removal of this analytical parameter from the baseline study analytical suite.*

Corrosivity: Corrosivity of surface and groundwater sources impacts drinking water supplies that rely on lead pipes for distribution. The Langelier Saturation Index, the preferred method for determining corrosivity, requires immediate analysis with no designated hold time. In addition to the absence of a drinking water source in the vicinity of RCQ, lead pipes are neither known to be in the vicinity nor upgradient of RCQ. *Holcim is requesting removal of this analytical parameter from the baseline study analytical suite.*

Foaming Agents: Foaming agents are contaminants discharged into water systems from anthropogenic sources. RCQ is neither known to be in the vicinity nor downgradient of a foaming agent source. *Holcim is requesting removal of this analytical parameter from the baseline study analytical suite.*

Odor: Laboratory analysis for odor requires a 48 hour hold time maximum and is subcontracted to a California-based laboratory by the primary analytical laboratory. The result will always be noted as “received beyond hold time” and invalid. *Holcim is requesting removal of this analytical parameter from the baseline study analytical suite.*

Phenol: Phenolic contaminants are discharged from industrial, agricultural and domestic activities. RCQ is neither known to be in the vicinity nor downgradient from industrial, agricultural (other than cattle grazing) and domestic activities that would be sources of the contaminant. *Holcim is requesting removal of this analytical parameter from the groundwater baseline study analytical suite.*

pH: Holcim requests that the Division accept field measurement of pH rather than laboratory analysis. Field instruments will follow the calibration procedure described in the Sampling and Analysis Plan and Quality Assurance Project Plan provided herein.

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Please feel free to contact me directly at 651.468.2029 with any questions.

Very truly yours,

Brown and Caldwell

Angela M. Bellantoni

Angela M. Bellantoni, Ph.D.



A handwritten signature in black ink, appearing to read "PD", with a stylized flourish extending from the end.

Paul Dupre, P.G., PMP.

Attachments (2)

1. Sampling and Analysis Plan
2. Quality Assurance Project Plan