



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources
1313 Sherman Street, Room 215
Denver, Colorado 80203

April 14, 2017

Edwin Olivares
GCC Rio Grande, Inc.
3372 Lime Road
Pueblo, CO 81004

**Re: Technical Revision (TR-06) Adequacy Review;
Pueblo Cement Plant and Limestone Quarry, File No. M-2002-004**

Dear Mr. Olivares,

The Division of Reclamation, Mining and Safety (Division) received Technical Revision (TR-06) for the Pueblo Cement Plant and Limestone Quarry, File No. M-2002-004. **The decision date for TR-06 is April 17, 2017.** Please be advised TR-06 may be deemed inadequate and denied on April 17, 2017, unless the following adequacy issued are addressed to the Division's satisfaction.

1. Within Section B – Well Completion and Development, GCC proposes to drill a groundwater monitoring well through the Fort Hays Limestone, terminating at the contact with the Codell Sandstone of the Carlile Shale formation. If saturation is not observed at the Fort Hayes/Codell contact, the well will be screened from five feet above the Fort Hayes contact to the top of Codell Sandstone. This proposal is contrary to GCC's April 22, 2016 letter and Close Consulting Group's March 17, 2016 technical evaluation, which state the primary target screen interval would include the Codell and continue up approximately five feet into the Fort Hayes/Codell contact. Please commit to screening the well for the entirety of the Codell Sandstone and extending five feet above, into the Fort Hayes Limestone, as previously indicated.
2. Please describe well completion and development if saturation is observed. Close Consulting Group's March 17, 2016 technical evaluation included a recommendation to install nested wells to monitor the Fort Hayes and Codell separately if saturation is observed, please include this as a part of TR-06 Section B.
3. Please provide the Division a cross section, similar to the Cross Section A-A' figure included in the Close Consulting Group's March 17, 2016 technical evaluation, depicting the proposed MW-006. Please also provide an additional cross section which depicts the potential nested wells if saturation is observed, as discussed in Item #2 above. In addition, please submit a map, similar to the map included within the Close Consulting Group's March 17, 2016 technical evaluation, which details the proposed location for MW-006. This map shall be appropriately sized and in compliance with the requirements of Rule 6.2.1(2).
4. The Index Map, dated July 8, 2002, and Pueblo Quarry Fault Maps (not dated) referenced as Attachment 4 of Section C – Topographic Map, fail to provide the information previously



requested by the Division in its correspondence dated May 24, 2016, and fail to satisfy the map requirements of Rule 6.2.1(2). Please submit a new map addressing these inadequacies. Please submit a topographic map, which delineates and labels the affected land boundary (permit boundary), the faults, describing the faults' displacements, and identify the dip and strike of the underlying sedimentary strata. Please ensure the map satisfies the basic map requirements of Rule 6.2.1(2).

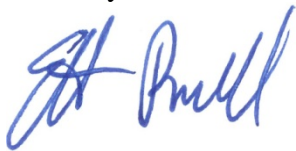
5. Within Section D – Revised Groundwater Monitoring and Sampling Plan, please elaborate on the protocol for obtaining a sample if the well goes dry before purging three casing volumes or before the parameters stabilize.
6. Within Section D – Revised Groundwater Monitoring and Sampling Plan, please define the “broad suite” analyte list which will be used to characterize groundwater samples. Please note, this should be a list of appropriate analytes from Tables 1-4 of Colorado Department of Public Health and Environment, Water Quality Control Commission 5 C.C.R 1002-41, Regulation 41 – The Basic Standards for Groundwater.
7. TR-06 states GCC will amend its closure bond and mine closure plan to reflect the cost and method used to abandon and plug MW-006. Please provide details on the abandonment and associated costs of abandonment of MW-006. Please also provide the maximum anticipated depth and borehole diameter of MW-006.
8. Within Section E – Proposed Numeric Protection Limits (NPL), GCC proposes to use the NPLs established in 2009. However, these NPLs were developed from samples obtained from MW-002, MW-003, and MW-004 (all have been abandoned) which were completed in saturated alluvium of Saint Charles River with no direct hydrologic connection to the dry colluvium underlying the operation. The NPLs established in 2009 appear no longer applicable. Should a sufficient number of monitoring events encounter groundwater as a part of TR-06, new NPLs will be established in accordance with the Colorado Department of Public Health and Environment, Water Quality Control Commission 5 C.C.R 1002-41, Regulation 41 – The Basic Standards for Groundwater.
9. The Division believes the proposed location for MW-006 is appropriate because it is located downgradient of the second mine panel (Years 6-15) and is within close proximity of the fault which bisects the second panel. However, MW-006 is likely not appropriately located for the first panel (Years 1-5). Located within this first panel is an un-lined sedimentation basin excavated into the Codell Sandstone. The Division is concerned this in-pit sedimentation basin could act as a groundwater infiltration gallery and therefore the installation of an additional monitoring well appears warranted. The location of this additional well would be most appropriate downgradient of the in-pit sedimentation basin (near Arroyo B). Please demonstrate how the location of MW-006 is sufficient to demonstrate compliance with the requirements of Rules 3.1.5(5), (10) and (11); 3.1.6, and 3.1.7 for activities occurring in the first two mine panels (Years 1-15) or commit to installing an additional well.

10. Within TR-06, the Close Consulting Group's March 17, 2016 technical evaluation states water is allowed to accumulate in the in-pit sedimentation basin a maximum of three days before being discharged by pump to Arroyo B, in accordance with GCC's Colorado Discharge Permit. Please provide a copy of the approved discharge permit for this activity. With the recent approval of TR-05, please demonstrate the Colorado Department of Public Health and Environment, Water Quality Control Division is aware the quarry's storm water, collected in the in-pit sedimentation basin and discharged to Arroyo B, will now come in contact with backfilled kiln feed material from the main kiln baghouse.
11. Please commit to providing the Division with well construction details and completion diagrams once the well has been constructed.

This concludes the Division's adequacy review of TR-06. This letter shall not be interpreted to mean there are no other technical deficiencies in your request. Other issues may arise as additional information is supplied. Please be advised, TR-06 may be deemed inadequate, and the request may be denied on **April 17, 2017**, unless the above mentioned adequacy review items are addressed to the satisfaction of the Division. If more time is needed to reply, the Division can grant an extension to the decision date. It will be your responsibility to request an extension of time to allow for continued review of this Technical Revision.

If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at **303-866-3567 x8132**, or by email at elliott.russell@state.co.us.

Sincerely,



Elliott R. Russell
Environmental Protection Specialist

Cc: Wally Erickson, Division of Reclamation, Mining & Safety