



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

June 20, 2018

Don Summers
Todd Creek Village Metropolitan District
10450 E. 159th Court
Brighton, Colorado 80602

**RE: Signal Reservoir No. 1 Expansion, DRMS Application No. M-2017-013
Adequacy Review No. 2**

Dear Mr. Summers,

The Colorado Division of Reclamation, Mining, and Safety (Division or DRMS) received Todd Creek Village Metropolitan District's (TCVMD) response to the Division's adequacy review on June 5, 2018. Below is the list of adequacy review issues that were originally identified followed by TCVMD's response to the items. If additional information or clarification is needed the Division's response indicates this. Adequacy review items that have been resolved are not listed. Also, several additional adequacy review items have been identified based on your response to the Division's adequacy review and several comment letters we have received from other government agencies. These items are listed at the end of this letter.

Rule 6.3.3 – Exhibit C – Mining Plan

1. It is understood that the access road to the permit area is from a gated entrance off of East 168th Avenue. This road appears to travel south to the oil well facility. However, the road is not depicted as entering the permit area. Please depict where the road enters the permit area on the Exhibit E1 map. In accordance with Rule 6.3.3(g), new or improved roads must be included as part of the permitted acreage.
 - a. **TCVMD Response:** The access road will be along the eastern edge of the permit area and will be approximately 300' in length and 35' in width tying in to the southern end of the north entrance road. The access road is in the area the District is planning to change the topography of to enhance the ease of operation and reduce maintenance costs of the Signal Reservoir complex. When the project is complete the area will be properly revegetated, or the road may become a permanent road if it is decided to locate the final pump station close by.
 - b. **DRMS Response:** As the road area may be revegetated after the excavation is complete, please provide a topsoil salvaging plan. Based on the soils information in the area please evaluate the depth of topsoil that is available to be salvaged. Please update the Exhibit E-1 map to depict the location of the topsoil stockpile. Also, please provide a topsoil replacement plan and a revegetation plan for this area.



3. Based on the Exhibit B Site Description and the Mining Plan, it appears groundwater will be encountered and surface water intercepted by the operation. Please describe how mining will affect the quantity and quality of the surface and ground water system and the methods that will be used to minimize the disturbance to these systems.
 - a. **TCVMD Response:** The excavation of the Signal 1 may encounter some water being held in the ground. The vast majority of this water will be from slow seepage of our Signal 2 Reservoir located less than 250' from the permit area. This water will simply be collected and returned to Signal 2. If we by chance encounter water in an unexpected area in sufficient amounts to cause concern, we will work with the Division of Water Resources to meet Colorado Water Laws and administrative requirements. We are completely confident we have adequate water rights to address any of these types of issues. With respect to the area ground water impacts, there are no houses locally that rely on this type of near-surface groundwater. The vast majority of water users are supplied by TCVMD. There are other few homes in the area are supplied by a small private water system that has its well in the deep Laramie Fox Hills aquifer. Their main well is located over 2 miles away from the permit site. The surface water runoff is already accounted for in our Signal 1 water storage decree and will be accounted for and handled in accordance with the decree. The District is completely comfortable that it can supply any water rights needed for this project from its excess water rights that total over 8300 acre- feet in an average year.
 - b. **DRMS Response:** The Division acknowledges TCVMD response and is aware that you are working with the Colorado Division of Water Resources on compliance with their requirements. Please see adequacy review item #9 below and respond accordingly.

Rule 6.3.6 – Exhibit F – List of Other Permit and Licenses Required

9. Please indicate if a well permit, substitute water supply plan and/or a effluent discharge permit will be required.
 - a. **TCVMD Response:** We do not anticipate needing a well permit, substitute water supply plan and/or an effluent discharge permit for this project. If any of these become necessary due to unforeseeable circumstances, we are prepared to immediately obtain any of the needed permits or plans for this project. There are a few relatively minor permits needed from Adams County (Grading & Drainage permit and a No export and Not for Sale Mining permit). The permit area excavation will not start until all permits are obtained.
 - b. **DRMS Response:** On June 11, 2018 the Division received a comment letter from the Colorado Division of Water Resources (DWR). This letter was forwarded to you via e-mail. Given the site description and the mining plan, it does appear groundwater will be encountered during the operation. Per the DWR's comment letter if groundwater is exposed or used the applicant will need to obtain a well permit and a substitute water supply plan or decreed plan for augmentation. Based on your response, you indicated TCVMD will obtain the permits if they are necessary. Given this, please commit to not

exposing groundwater until a well permit and a substitute water supply plan or decreed plan for Augmentation is obtained.

Rule 6.3.12 – Exhibit L – Permanent Man-Made Structures

10. This exhibit included engineering evaluations for structures within 200 feet of the affected land owned by KP Kaufman Company, Inc. and ERN Limited Partnership Et Al. These evaluations assert that the structures will be stable given the 3H:1V constructed slopes of the reservoir. Please provide documentation such as modeling to support this assertion. Enclosed is a Mined Land Reclamation Board approved policy regarding accepted factors of safety for slope stability/geotechnical analyses associated with mining operations. Or, if the entities described above have signed the structure damage agreements, you may submit those signed copies instead of the documentation and modeling.
- a. **TCVMS Response:** The permit area is within the water retention area of the Signal 1 Dam rehabilitation area. In short, the permit area will be underwater when the projects are complete. The Signal 1 Dam is considered a "High Hazard Dam" and therefore very complete soil and slope stability analysis have been completed in accordance with Department of Water Resources Dam Safety Division requirements. The soils in this area have been shown to be stable enough to support a "High Hazard Dam" directly on top of a 3:1 slope excavation. This slope stability analysis was run for steady seepage, end of construction, rapid-drawdown (soil drained, and soil undrained) and seismic scenarios. There was no setback from the 3:1 slope for the dam in these analysis'. Since both the KP Kaufman well and the ERN fence & road are located further away from the 3:1 slope than the dam was in the testing models, we request the DRMS accept the slope stability tests that were done by Earth Engineering Consultants as acceptable documentation of slope stability for this project.
 - b. **DRMS Response:** The Division's geotechnical stability staff is currently reviewing the Earth Engineering Consultants analysis. If any additional information or questions arise we will forward them to you as soon as possible.

The following adequacy review issues have been identified based on your response provided to the Division and based on comment letters received.

- I. Per the DWR comment letter, the proposed reservoir expansion operation will not qualify the reservoir for storage if the expansion occurs below the groundwater level. Therefore in order for the reservoir to be approved for water storage the operator must line the reservoir and perform a liner leak test in accordance with the August 1999 State Engineer Guidelines for Lining Criteria for Gravel Pit (1999 SEO Guidelines) once mining is complete and the site is at final grade. Does TCVMD anticipate needing to line the reservoir to prevent the inflow of groundwater? If so, please provide a plan for lining the reservoir and provide a cost estimate for the installation of the liner.

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- II. If a pit liner will be installed, please evaluate the flow of groundwater in and around the lined reservoir. Please model if groundwater mounding or shadowing will occur and evaluate the impacts this may have on the hydrologic balance within and adjacent to the affected land. Please provide a plan for minimizing the impact of the hydrologic balance and provide a plan for protecting off-site areas from damage.
- III. The Division received the attached comment letter from the Office of Archaeology and Historic Preservation on June 19, 2018. The comment letter cites the wrong application number but it pertains to this 111c application. Please review it and acknowledge receipt.

The Division is required to issue a decision to approve, approve with conditions or deny the 111c application by June 26, 2018. If you need additional time to address the adequacy review issues noted above, please request an extension of the decision date. If you have any questions feel free to contact me at (303) 866-3567, extension 8120.

Sincerely,



Jared Ebert
Environmental Protection Specialist III

Enclosures: *1.) Comment Letter from the Office of Archaeology and Historic Preservation, received June 19, 2018.*

EC: Don Summers, Todd Creek Village Metro. District, don@pssmail.com