STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

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COLORADO DIVISION OF RECLAMATION MINING & SAFETY

August 29, 2012

Mr. John Hamrick
Cotter Corporation
P.O. Box 1750
Canon City, CO 81215

Re: Schwartzwalder Mine, Permit No. M-1977-300
Amendment 4 (AM-04), Preliminary Adequacy Review

Dear Mr. Hamrick:

DRMS has completed a preliminary adequacy review of the Amendment 4 application, and has the following comments.

1. As an alternative to pumping down the mine pool to 500 feet below the Steve Level, DRMS will consider approving a plan to pump the mine pool down to 150 feet below the Steve Level. The Division would consider a plan for an immediate pump down of the mine pool to 150 feet and maintaining the mine pool elevation at 150 feet throughout the in-situ treatment trial phase of AM-04. An immediate pump down to 150 feet would reduce the mine pool to an elevation of approximately 63 feet below Ralston Creek in the permit area (thus preventing mine pool flow toward the creek), while also reducing the exposure of wall rock in the workings, compared to pumping down to the 500-foot level (thus minimizing uranium oxidation in the workings).

   Pumping down to 150 feet would be contingent on Cotter and DRMS and/or MLRB executing an agreement that provides for Cotter withdrawing its pending appeal in the Colorado Court of Appeals (Case Number 2012CA763), and the MLRB modifying its August 11, 2010 Order to reflect the 150-foot pump-down level. This change in the pump-down level would also require Cotter to provide revised pages of the AM-04 submittal to reflect the 150-foot pump-down level.

2. Please change the chronologic sequence of the tasks shown in Figure 18 of Exhibit E so that pumping down the mine pool is not delayed by a task or a portion of a task that is not absolutely essential for pumping down the mine pool. Please add a statement at the beginning of Section E-5.3 that clearly explains Cotter will immediately initiate pumping down the mine pool, and the pumping will precede the initiation of in-situ biologic treatment of the mine pool.

3. Returning reverse osmosis (RO) concentrate to the water in the underground workings of a uranium mine, and then performing in-situ biologic treatment on the water, is a unique approach to mine water treatment. The outcome of this approach may be unpredictable. Please add to Exhibit E a description of:

   a. Previous barrel testing of in-situ biologic treatment (see Section 10.2.2 of Schwartzwalder Mine Hydrologic Evaluation of Mine Closure and Reclamation, 2007),

   b. A plan for conducting pilot-scale testing of disposing RO concentrate and in-situ biologic treatment inside the pumped down mine pool prior to full-scale disposal and treatment inside the pumped down mine pool,

   c. The expected secondary effects resulting from the creation of strongly reducing conditions in the mine pool,

   d. The expected effect of RO treatment residuals on the mine pool treatment process, and

e. The expected effect of organic carbon on the RO treatment process.

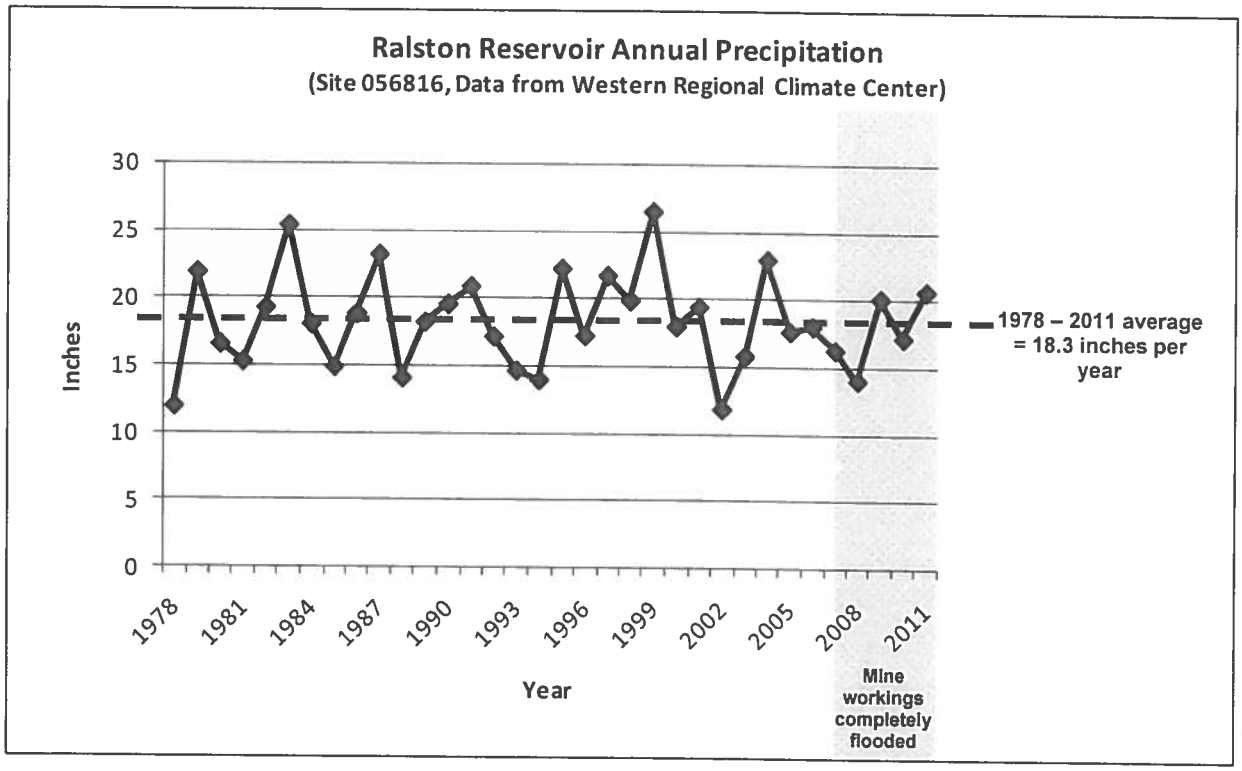
4. Please add to Exhibit E the printout of results of model projections for the RO system.

5. Please add to Exhibit E a contingency plan for disposing RO residuals outside the mine pool, should pilot-scale testing or full-scale testing indicate returning the residuals to the mine pool is not feasible.
6. Please add to Exhibit E the minimum criteria that must be met before the in-situ trial is terminated and full-scale in-situ treatment begins.

7. Please add to Exhibit E the specific criteria that must be met before ceasing mine pool pumping and before ceasing ex-situ active treatment of the mine pool.

8. Please add to Exhibit E a commitment to submit an amendment application when you propose to cease mine pool pumping and ex-situ active treatment of the mine pool. This important milestone will warrant DRMS review and notice to the public.

9. Please add to Exhibit E a plan to monitor the mine pool quality and level for a minimum 10-year period after pumping ceases and the mine pool has refilled to approximately 24 feet below the Steve Level. A minimum 10-year monitoring period is necessary for demonstrating the mine pool water quality and flooding level have reached long-term stability. Although Section E-5.2.3 of the submittal indicates the mine pool is expected to stabilize at or near its current water level of 24 feet below the Steve Level, the level of the filled mine pool has not been observed during relatively wet years such as occurred in the 1980s and 1990s (see precipitation graph below). A close correlation between annual precipitation and mine pool fluctuations is noted in the previously approved Environmental Protection Plan.



Sealing fractures and boreholes with grout may cause the mine pool to rise to elevations higher than previously observed, resulting in increased head being exerted on unsealed fractures and boreholes, thus promoting new discharges from those openings. Based on the historical pattern of wet and dry years shown in the precipitation graph DRMS considers a reasonable minimum monitoring period to be 10 years following grouting and mine pool refilling. Compared to a 3-year or 5-year monitoring period, a 10-year monitoring period significantly increases the probability that the monitoring period will include a few relatively wet years as occurred in the 1980s and 1990s.

Confirming the ultimate long-term maximum elevation of the mine pool is critical to the proposed mitigation plan because the plan relies on containment of mine water in the mine pool for preventing the escape of sulphate-laden water to Ralston Creek. DRMS believes such containment of water in the mine pool should be monitored over an extended period of time before the containment can be considered a success.

10. Please add a firm commitment in Exhibit E stating that, in the event In-Situ treatment fails to adequately achieve remedial performance benchmarks, Cotter will conduct mine dewatering and ex-situ treatment to a depth of 150 feet, or other depth as necessary, to maintain a clear hydralulic gradient into the mine and protect Ralston Creek from potential impacts related to the mine pool.

11. Please add to Exhibit E a conceptual design for a perpetual, passive ex-situ treatment system and identify the specific criteria which must be met by the water quality in the mine pool and Ralston Creek before passive ex-situ treatment will begin.

12. Please add to Exhibit E an option to make the diversion pipeline a permanent structure, and specify the criteria that must be met for making the decision to leave it as permanent, and the criteria that must be met before removing the pipeline.

13. Please identify in Exhibit E the treatment concentration targets for uranium and other constituents of concern.

14. Please provide legible replacement pages for Figures 8 and 21 of Exhibit E.

15. Please add to Exhibit E a plan for disposing the sand filter backwash waste (generated during treatment of alluvial water) and the RO chemical cleaning waste.

16. DRMS will determine the amount of required financial warranty (reclamation bond) for AM-04 after receiving your responses to this letter.

17. To enable DRMS to publish on its Laserfiche imaging system the progress of reclamation activities, please add to Exhibit E a commitment to submit to DRMS a reclamation report within 45 days after the end of each calendar quarter. Please include in each reclamation report the following information from activities conducted in the previous quarter:

    a. Installation of pumping and treating facilities,
    b. Summary of pumping and water treatment activities,
    c. Summary of ex-situ and in-situ treatment performance,
    d. Summary of corehole and fracture sealing activities,
    e. Summary of alluvial fill disposal activities, and
    f. Concentrations of constituents of concerns after alluvial fill is removed.

18. Please add a statement to Exhibit E that explains IX regeneration waste or spent resin will not be placed in the mine workings.

19. Please add to Exhibit E the details of the grouting program/incorporate the plans provided in TR-20 into the AM-04 process.

20. Please add to Exhibit E a plan for installing a monitoring well in the alluvium beneath the South Waste Rock Pile.

21. Please consider using pan lysimeters instead of suction lysimeters for monitoring infiltration through the South Waste Rock Pile.

22. Please consider including sulfuric acid dosing for pH adjustment prior to the RO system.

23. Please revise Figure 7 to show radium in picocuries per liter (pCi/L).

24. Please add to Exhibit E a detailed drawing showing the precise flow path of naturally seeping ground water at the base of the Glory Hole as the water reports "to the adjacent mine pool" (page 19 of Exhibit E). Without properly designed backfilling and drainage, the flow of the seeping water at the base of the backfilled area could be blocked as the fill settles, resulting in much of the fill becoming saturated with the seeping water.

    A seepage rate of 1 gpm in the Glory Hole would be sufficient to saturate the entire 56,000 cubic yards of backfilled alluvial fill in less than 2 years (assuming the fill has 15% porosity). Alluvial material is proposed to be backfilled in the Glory Hole to a height greater than 150 feet. If this material becomes saturated it could exert more than 150 feet of head on the hydraulic seal in the Steve Level at the base of the fill and exceed the seal's designed maximum pressure of 120 feet of head.

25. Please add to Exhibit E a prediction of water quality discharges from the mine site that are expected to occur during the time period when the water treatment plant will be moved from its current location to the flat area near the Steve Portal. Please include a description of the water quality control plan that will be followed during that time period.

Sincerely,

Tom Kaldenbach

Tom Kaldenbach

cc: Tony Waldron, DRMS
Mike Harris-WQCD
Jeff Fugate-AGO
Tom Roode-Denver Water