



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

May 12, 2015

Mr. Patrick C. Siglin
Black Range Minerals
110 N. Rubey Drive, Suite 201
Golden, CO 80403

**Re: Hansen Uranium Project; DRMS NOI File No. P-2009-025;
Second Notice of Deficiencies NOI Modification 3 (MD-3)**

Dear Mr. Siglin:

On May 1, 2015, the Division of Reclamation, Mining and Safety (Division) received your "Response to Deficiencies" letter addressing the Division's January 29, 2015 Notice of Deficiencies comments for the Notice of Intent (NOI) to Conduct Prospecting Modification Application for the Hansen Uranium Project, File No. P-2009-025. Our review of the "Response to Deficiencies" letter found the following items require additional responses to address deficiencies as defined by Rule 5.1.3 of the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal, and Designated Mining Operations. The original comment numbers have been retained for the purpose of tracking responses.

The decision date for this modification application is May 13, 2015. Please be advised that if you are unable to satisfactorily address any concerns identified in this review before the decision date, it will be your responsibility to request an extension of the review period. **If there are outstanding issues that have not been adequately addressed prior to the end of the review period, and no extension has been requested, the Division may terminate the NOI modification application in accordance with Rule 5.1.3(c) of the Hard Rock Rules.**

- 1) Page 3, Item L (Form 2, Item F on Form 1) – The response to this comment is adequate.
- 2) Page 4, Item 11 (Form 2, Item 5 on Form 1) – "... *potential for subsidence* ..." Please clarify:
 - a. *The expected depth range of the cavern, ...* The response to this comment is adequate;
 - b. *The expected duration the cavern is to be open ...* The response to this comment is adequate.
- 3) Page 4, Item 12 (Form 2, Item 6 on Form 1) – "... *hydrogeology* ...".
 - a. *Please describe how the aquifers above the ore zone are protected from cross contamination; especially consider the high pressure of the proposed system.* The



- response is partially adequate. The response addresses how the ore zone water pressure is isolated from the ore zone, but additional clarification is needed to address how effective the annular seal will be at protecting the water bearing zones above the high pressure cutting jet. A drawing or schematic representation of the borehole form surface to cutting jet might be useful in demonstrating the proposed protective measures. Please also include drawings, specifications and analyses to demonstrate the water lines have a sufficient factor of safety against rupture for the high pressures involved.
- b. "... *maximum expected horizontal and vertical extents* ...". The response to this comment is adequate.
- 4) Page 4, Item F (Form 2, Item D on Form 1) – Please clarify:
- a. *In which water bearing zones* ... The response to this comment is adequate;
- b. *What is the expected horizontal proximity* ... The response to this comment is adequate.
- 5) Page 4, Item G (Form 2, Item E on Form 1) – *The list of chemical ... Please clarify the ultimate disposition of:*
- a. *The decanted "jet" water* ... The response is partially adequate. Please address the ultimate disposition of container/pit from which decanted "jet" water would be stored onsite and allowed to evaporate,
- b. *coarser material* ... The response to this comment is partially adequate. Please clarify whether any of the "mining and processing studies" are to performed onsite, or if it will all be performed offsite.
- c. *finer material* ... The response to this comment is partially adequate. Please clarify whether any of the "mining and processing studies" are to performed onsite, or if it will all be performed offsite.
- 6) Page 6, Item 9 (Form 2, Item 4 on Form 1) – *The bulk sample ... Please provide:*
- a. *An estimated borehole/cavity volume* ... The response to this comment is adequate.
- b. *A unit cost for the cement-bentonite*. The response to this comment is adequate.
- The Division is currently evaluating the financial warranty to determine if it requires adjustment for this one-time bulk sample extraction.
- 7) Page 6, Item 10 (Form 2, Item 5 on Form 1) – No response necessary.
- 8) Page 7, Item 12 (Form 2, Item 7 on Form 1) – *Mountain Mahogany* ... The response to this comment is adequate.
- Other Issues Non-specific to the NOI Modification Application**
- 9) UIC Permit – The response to this comment is adequate.

- 10) Geochemistry – The response to this comment is partially adequate. The fourth paragraph of the response alludes to two topics that require further clarification: a) “massive reduction capacity of the formation”, and b) “the mineral zone interacting with infiltrating meteoric water”. Please:
- a. Elaborate on the massive reduction capacity. The Division has limited knowledge of the ore zone,
 - b. Explain how infiltrated meteoric water in the ore zone still has a DO concentration similar to the source meteoric water given the “massive reduction capacity of the formation” alluded to in part (a).
- 11) Source of water – The response to this comment is adequate.
- 12) Borehole size – *Please confirm the proposed 12-inch borehole will be adequate ...* The response to this comment is adequate.
- 13) Groundwater Baseline Monitoring – The response is partially adequate. Please provide a map showing the locations of monitoring wells: MW-27-290, MW-27-291, MW-27-292, MW-27-293, MW-27-294, MWC-109, MWC-21-150, MWC-21-202, MWC-21-210, and MWC-21-216.

Please remember to designate as appropriate those materials in the application that you desire to be kept confidential versus those to be made public. Additionally, if you have received any pertinent correspondence from the Bureau of Land Management, please forward copies to the Division.

If you have any questions, please contact me (303-866-3567 ext. 8169).

Sincerely,



Timothy A. Cazier, P.E.
Environmental Protection Specialist

cc: Wally Erickson, DRMS
Amy Eschberger, DRMS
Jennifer Thurston, INFORM
Jim Woodward, CARD
Kay Hawkle
Lee J Alter, Tallahassee Area Community, Inc.
DRMS file