



## U.S. Department of Energy

200 Grand Avenue  
Grand Junction, CO 81501

June 3, 2010

Mr. Richard Chang, Engineer/Project Manager  
FSME Division of Waste Management and Environmental Protection  
U.S. Nuclear Regulatory Commission  
Mail Stop T8F5  
Washington, DC 20555-0001

Subject: Request for Additional Information from the Moab Uranium Mill Tailings  
Remedial Action (UMTRA) Project

Dear Mr. Chang:

As per our telephone conference call today, we are providing additional information regarding calculations of the radon emanation from the Crescent Junction disposal cell. The Department of Energy (DOE) Moab UMTRA Project submits four copies each of the enclosed reports in reference to our conversation. These reports are titled: *Evaluation of Insufficient Cover Thickness at Crescent Junction Disposal Cell Edge*, *Assessment of the Design of the Crescent Junction Disposal Cell Cover*, and the *Crescent Junction Disposal Cell Average Radon Flux Supplement Calculation*.

A brief explanation of each document is provided.

The Remedial Action Contractor's lead engineering company, Jacobs Engineering (Jacobs) prepared an explanation of the impact of the reduced thickness of frost protection layer that would be placed over a portion of the tailings with interim cover already in place if the cover was completed as designed. Their evaluation included four options. Note that the Jacobs' evaluation only considered the radon emanation in the area of thinned frost protection layer, not over the entire cover as an average rate.

In response to this evaluation DOE requested the Technical Assistance Contractor, S&K Aerospace (S&K), to evaluate the alternatives considered by Jacobs. S&K used MACTEC, to perform the evaluation which was reported on March 31, 2010. The MACTEC report showed that although locally the radon exceeds the limit, the area is small compared to the rest of the disposal cell. This assessment and calculation only evaluated a reasonable portion of the cell where interim cover had already been placed (and would be placed during NRC review time). Because the results showed that the reduced thickness of frost protection layer did not significantly impact the overall radon emanation, a further request was made of MACTEC to consider the affect of completing cell construction with the larger area having the reduced frost layer. This calculation was summarized in a letter dated April 7, 2010.

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You may recall that I asked a question of the participating project staff of the modeled condition. This is described on page 4 of the MACTEC report dated March 30, 2010. Essentially the area was modeled as ignoring the entire frost protection layer as if it was completely ineffective by repeated freeze thaw cycles. The concern was that then the radon barrier was further damaged by freeze thaw cycles.

We trust this information will satisfy your review. If you have any questions or require additional information, please contact me at (970) 257-2115.

Sincerely,

A handwritten signature in black ink, appearing to read "Donald R. Metzler", with a stylized flourish at the end.

Donald R. Metzler  
Moab Federal Project Director

cc w/ enclosures:

K. Conway, NRC (e)

J. Berwick, DOE (e)

K. Wethington, DOE (e)

L Brede, RAC (e)

C. Niemeyer, RAC (e)

J. Ritchey, TAC (e)

Project File MOA 2.12 (C. Smith)

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