March 10, 2017

Mr. Philip S. Strobel, Director
NEPA Compliance and Review Program
Office of Ecosystem Protection
and Remediation
1595 Wynkoop Street
Denver, CO 80202-1129

SUBJECT: RESPONSE TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE RENO CREEK IN SITU RECOVERY PROJECT (DOCKET NUMBER: 40-9092)

Dear Mr. Strobel:

Thank you for your comments on behalf of the U.S. Environmental Protection Agency Region 8 concerning the Final Supplemental Environmental Impact Statement (SEIS) for the proposed Reno Creek In Situ Recovery (ISR) Project (NUREG 1910, Supplement 6). In your letter dated January 17, 2017(Agencywide Document Access and Management System, ML17024A210), you made three comments regarding the final SEIS, which included legibility of figures, Chapter 6, "Mitigation," and vertical excursion monitoring. The U.S. Nuclear Regulatory Commission (NRC) staff has addressed to your comments below.

Figures

The NRC staff appreciates your comment regarding the legibility of Figure 3.13, "Map Showing the Modeled 100-Year Flood Inundation Boundary of the Belle Fourche River Within the Proposed Reno Creek ISR Project Area." Although the NRC staff attempted to improve the image quality, the NRC's current practice—to publish documents in black and white—limits the quality of images in NRC-issued documents. For future documents, NRC will consider your suggestion to make a digital version in color to allow for improved image quality.

Mitigation

You commented that the mitigation measures in Chapter 6 were not clear, and that the tables in that chapter were clarified through a phone conversation with the NRC. To clarify, Table 6-1, "Summary of Mitigation Measures Proposed by AUC," identifies mitigation measures that the applicant has committed to in the license application. Mitigation measures identified in Table 6-2, "Summary of Mitigation Measures Identified by the NRC," are those identified by the NRC but are not requirements being imposed upon the applicant.

You noted that similar mitigation measures are identified in both Tables 6-1 and 6-2 and provided examples of specific groundwater mitigation measures. Similar mitigation measures

are presented in both Tables 6-1 and 6-2. However, the mitigation measures noted in Table 6-2 are slightly different and more conservative than those identified in Table 6-1. The NRC staff based its safety findings and the environmental consequences on those mitigation measures identified in Table 6-1. While the NRC staff cannot impose mitigation measures outside its regulatory authority under the Atomic Energy Act, the NRC staff identified mitigation measures in Table 6-2 that could potentially reduce the impacts of the Reno Creek ISR Project. Please note that the two specific measures from Table 6-2 that you mention in your letter form the substance behind two proposed license conditions.

You suggested that a clarification should be added to the Record of Decision (ROD) to address the differences in the mitigation methods mentioned in the tables. Although the specific details of Table 6-1 and Table 6-2 were not discussed in the ROD, the staff did state that the mitigation measures in Table 6-1 serve as the basis for the staff's conclusion. The staff will consider your comment and review the text in Chapter 6 for clarify when developing similar reports for future activities.

Vertical Excursion Monitoring

You explained your concern regarding vertical excursion monitoring below the production zone because the sand lenses in the aquitard are discontinuous. You also noted that the possibility of fracture may create conduits for fluid migration and suggested adding downgradient monitoring in the lower aquifers.

The NRC staff reviewed the need for monitoring in its safety review, which included verification of the characteristics of the lower formations. The NRC staff determined that, although the lower aquitard contains discontinuous sand lenses, the thickness and the hydraulic conductivity are sufficient to inhibit the migration of fluids and that vertical excursion monitoring of the lower formation is not necessary. Also, according to the application, no faulting has been identified within the entirety of the proposed project area. Based on information provided in the application, structure maps and structural cross sections constructed from historic and recent geophysical and lithologic logs do not indicate the presence of faults within mineralized sandstones, confining units, and marker beds at the proposed project.

Thank you for your comments and your ongoing effort to support the NRC staff's development of the SEIS for the Reno Creek ISR Project. The NRC staff especially appreciates the work of Ms. Lisa Lloyd on this project. If you would like to discuss this issue further, please contact NRC Project Manager, Ms. Jill Caverly at 301-415-7674 or via email at Jill.Caverly@nrc.gov.

Sincerely,

/RA/

Cinthya I. Román, Chief
Environmental Review Branch
Division of Fuel Cycle Safety Safeguards,
and Environmental Review
Office of Nuclear Material Safety
and Safeguards

Docket No.: 040-9092
License No.: SUA-1602

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