

November 11, 2014

MEMORANDUM TO: Bill Von Till, Chief  
Uranium Recovery Licensing Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

FROM: Chad Glenn, Sr. Project Manager **/RA/**  
Uranium Recovery Licensing Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: OCTOBER 2, 2014, PUBLIC MEETING SUMMARY

On October 2, 2014, a Public Meeting was held with AUC LLC (AUC) at the U.S. Nuclear Regulatory Commission Headquarters. The purpose of the meeting was to discuss AUC's response to staff's request for additional information on AUC's license application. A summary of the meeting is enclosed.

Docket No: 040-09092

Enclosure: Meeting Summary

cc: Meeting Attendees (via email)

CONTACT: Chad Glenn, NMSS/DUWP  
(301) 415-6722

MEMORANDUM TO: Bill Von Till, Chief  
Uranium Recovery Licensing Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

FROM: Chad Glenn, Sr. Project Manager **/RA/**  
Uranium Recovery Licensing Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: OCTOBER 2, 2014, PUBLIC MEETING SUMMARY

On October 2, 2014, a Public Meeting was held with AUC LLC (AUC) at the U.S. Nuclear Regulatory Commission Headquarters. The purpose of the meeting was to discuss AUC's response to staff's request for additional information on AUC's license application. A summary of the meeting is enclosed.

Docket No: 040-09092

Enclosure: Meeting Summary

cc: Meeting Attendees (via email)

CONTACT: Chad Glenn, NMSS/DURW  
(301) 415-6722

**ML14310A181**

<b>OFFICE</b>	<b>DUWP</b>	<b>DUWP</b>	<b>DUWP</b>	<b>DUWP</b>
<b>NAME</b>	CGlenn	SAchten	JCaverly	CGlenn
<b>DATE</b>	11/6/14	11/11/14	11/6/14	11/11 /14

**OFFICIAL RECORD COPY**

## MEETING SUMMARY

DATE: October 2, 2014

PLACE: NRC Two White Flint North, Conference Room 8-A1  
1155 Rockville Pike  
Rockville, Maryland

PURPOSE: This meeting was held to discuss the AUC LLC (AUC) proposed Reno Creek In Situ Leach Uranium Recovery (ISR) project application for a source material license and responses to requests for additional information.

ATTENDEES: See Attachment1

### BACKGROUND:

On October 3, 2012, AUC submitted a license application requesting authorization to construct and operate its proposed Reno Creek ISR project to be located in the Powder River Basin near Wright, Wyoming. This submittal is publicly available in the U.S. Nuclear Regulatory Commission (NRC) Agencywide Document Access and Management System (ADAMS) via Accession Number ML122890785. The NRC staff's acceptance of the license application request is documented in a letter dated June 18, 2013 (ADAMS Accession Number ML13161A319). After the acceptance review, the staff proceeded with its review of the license application request and determined that additional information was necessary to complete its review. Staff issued a Request for Additional Information (RAI) on February 10, 2014 (ADAMS Accession Number ML13365A110). On June 13, 2014, AUC submitted responses to NRC's RAI (ADAMS Accession Number ML14169A452). On September 9, 2014, NRC staff accepted AUC's RAI responses for detailed technical review (ADAMS Accession Number ML14247A276).

### DISCUSSION:

The purpose of this meeting was to discuss details of AUC's RAI Response. The attendance list is included as Attachment 1, the agenda is included as Attachment 2, and the NRC Tracking Points are included as attachment 3. This summary addresses topics in the order discussed in the meeting.

AUC opened the discussion with a summary of proposed changes to the RAI responses. In this discussion, AUC reiterated its decision to maintain the original Proposed Action, including disposal of wastewater from the facility only into Class 1 Deep Disposal Wells (DDWs) and to withdraw RAI responses or portions of responses that specifically discussed the possible incorporation of land application and modify them appropriately. AUC notified NRC of this decision on September 4, 2014 (ADAMS Accession Number ML14251A011).

NRC staff summarized its current review activities noting that it is currently conducting a detailed technical review of AUC's application. Staff indicated they will address questions and open items related to specific RAI responses to obtain information needed to complete the safety and environmental reviews, and indicated that failure to obtain this information could delay the staff's review or result in a license condition.

Enclosure

## Technical Discussions

- **Land Use and Waste Management**

In this discussion, AUC referred to above discussion regarding AUC's decision to maintain their original Proposed Action for disposal of facility wastewater only to DDWs. NRC staff had no questions or open items after this discussion.

Path Forward: NRC staff will perform a comparative analysis of AUC's proposed action with an alternative similar to the liquid waste disposal option described in the Generic Environmental Impact Statement and other recent ISR reviews.

### **RAI POH-3 Maximum Radon Emissions**

NRC requested additional details regarding the year of highest radon emissions and the calculated dose corresponding to that year.

Path Forward: AUC committed to provide this information in its revised response to RAI-POH-3.

### **RAI-23, RAI-24, and RAI-25 Background Radiological Characteristics**

In response to RAIs, the applicant committed to sample vegetation and livestock prior to construction but, to date, has not provided this data. Staff explained that it needs this data now to complete the SER. The data would indicate that the samples were collected in accordance with RG 4.14. In this discussion, AUC stated that vegetation sampling data was provided in the application and confirmed that livestock sampling data was not in the application.

Path Forward: AUC will check to verify the location of vegetation sampling data in the application and get back to NRC. NRC and AUC agreed to have a follow-up discussion on livestock sampling in a future public meeting (Action Item 1).

### **RAI-26 Background Radiological Characteristics**

In response to this RAI, the applicant provided a reference for surface water data. Based on staff's review of this data in the application, NRC staff did not find any analyses for dissolved and suspended solids for natural uranium. RG 4.14 recommends analyzing surface water dissolved and suspended solids for natural uranium. The applicant needs to provide data for dissolved and suspended solids for natural uranium for surface water or provide results if they are available.

Path Forward: After this discussion, the applicant had no clarifying questions. Therefore, NRC expects that the applicant will either identify where this information is located in the application or provide this information in its revised response to RAI-26.

**RAI-37 Effluent Control**

In response to this RAI, the applicant did provide sufficient information regarding how they determined 4 air exchanges per hour. NRC staff cannot determine the volume of 4 air exchanges per hour. The applicant should show the volume of the facility where 4 air exchanges per hour will be achieved and also demonstrate that the ventilation exhaust (fans) have the capacity to achieve 4 air exchanges per hour.

Path Forward: After this discussion, the applicant had no clarifying questions. Therefore, NRC expects that the applicant will provide this information in its revised response to RAI-37.

**RAI-41, RAI-50, and RAI-74 Effluent Monitoring**

In response to RAIs, the applicant indicated that they will provide to the NRC staff, for review and written verification, written procedures for its airborne effluent and environmental monitoring program no later than 30 days before the preoperational inspection to show compliance with 10 CFR 40.65. NRC staff explained that this information is needed now to complete the Safety Evaluation Report (SER). If applicant does not provide information to adequately address this open item now, it may require a license condition. NRC staff recommends resolving this issue as soon as possible to avoid a license condition.

NRC staff is seeking the following information:

- Identify all potential air and gaseous effluent release points.
- Discuss how each potential air and gaseous effluent release point will be monitored and how this information (or data) will be incorporated into the 10 CFR 40.65 report.
- Discuss how the measurements from each potential air and gaseous effluent release point will be expressed as a quantity (as described in 10 CFR 40.65).
- Discuss the type of radiation measuring device and measurement of the effluent and how the measurements will be converted to a total quantity (expressed in Curies) and a release rate (Curies per unit time).

If the applicant chooses to measure at a fence line (or restricted or control area), the applicant should demonstrate how the data from the measurements at a fence line will be extrapolated back to an effluent release point to identify the quantities of the principal radionuclides released to the environment.

Path Forward: AUC and NRC agreed to have a follow-up discussion on this open item in a future public meeting (Action Item 2).

**RAI-42 Qualifications for Personnel Conducting Radiation Safety Program**

In response to this RAI, the applicant indicated that the designee's training and qualification will be consistent with his/her level of responsibility, and will also be consistent with RG 8.31. The applicant provided a list of the training and qualification.

NRC staff reviewed the list and determined that it is not consistent with RG 8.31. For example, RG 8.31 includes 2 years of relevant work experience in applied radiation protection. The response states a minimum of three months experience at the Reno Creek ISR Facility. The response is not consistent with RG 8.31. It is recommended that the applicant review Crow Butte SER (ML14149A433) and Lost Creek SER for Amendment No. 1 (ML13016A071) and determine if these programs are acceptable for providing an alternative response for NRC review.

Path Forward: After this discussion, the applicant had no clarifying questions. Therefore, NRC expects the applicant will provide this information in its revised response to RAI-42.

#### **RAI-46 and RAI-49 Contamination Control Program**

In its RAI response, the applicant provided Minimum Detectable Activity (MDAs) for alpha measurements but no MDAs for beta measurements. This is not consistent with the response to RAI-49. In this discussion, the applicant inquired if NRC staff could provide a reference that may serve as an example of an acceptable response.

Path Forward: NRC staff agreed to provide a reference that may serve as an example (Action Item 3).

#### **RAI-52 Airborne Effluent and Environmental Monitoring Program**

(See RAI-26)

Path Forward: After this discussion, the applicant had no clarifying questions. Therefore, NRC expects that the applicant will either identify where this information is located in the application or provide this information in its revised response to RAI-52.

#### **New RAI (Identified in February 26, 2014 Public Meeting) Meteorology**

The applicant needs to determine if important meteorological parameters (wind speed and wind direction) are representative.

- Air Quality
- Other reviews areas, as needed

Path Forward: After this discussion, there were no clarifying questions. Therefore, the NRC expects that the applicant will either identify where this information is located in the application or provide this information in its response to this RAI.

#### **RAI-EC-6 Weed Mitigation**

NRC asked the applicant to provide the guideline standard that the applicant is referring to in this RAI response.

Path Forward: The applicant responded that they will provide the guideline standard in its revised response to RAI-EC-6.

### **RAI-EC-7 Mitigation Measures for Avian Injury and Death**

NRC asked the applicant to provide an overview of their discussion with the State regarding mitigation measures related to avian inquiry.

Path Forward: The applicant responded that they will provide this information in its revised response to RAI-EC-7.

#### Action Items

1. AUC will check to verify location of the vegetation sampling data in the application and get back to NRC. NRC will arrange follow-up discussion on livestock sampling in future public meeting. In response to a this action item, a follow-up discussion on livestock sampling is planned for the October 23, 2014 public meeting.
2. AUC and NRC agreed to have a follow-up discussion on effluent monitoring in a future public meeting. In response to this action item, a follow-up discussion on effluent monitoring is planned for the October 23, 2014 public meeting.
3. NRC staff committed to provide a reference in conjunction with the discussion of this open item. In response to this action item, NRC is providing the following reference which is publicly available in ADAMS via Accession Number ML14064A128.

#### Public Comments:

Prior to adjourning the meeting, staff solicited comments from members of the public, but there were no public comments.

#### Attachments:

1. List of Attendees
2. Meeting Agenda
3. NRC Talking Points ML14275A336

**NRC Public meeting regarding RAI Response Package for Reno Creek Project  
October 2, 2014  
Attendees**

<b>NAME</b>	<b>AFFILIATION</b>	<b>EMAIL/PHONE</b>
Jill Caverly	NRC	<a href="mailto:Jill.Caverly@nrc.gov">Jill.Caverly@nrc.gov</a>
Chad Glenn	NRC	<a href="mailto:Chad.Glenn@nrc.gov">Chad.Glenn@nrc.gov</a>
Antoinette Walker-Smith	NRC	<a href="mailto:Antonette.Walker-smith@nrc.gov">Antonette.Walker-smith@nrc.gov</a>
Kellee Jamerson	NRC	<a href="mailto:Kellee.Jamerson@nrc.gov">Kellee.Jamerson@nrc.gov</a>
Jim Webb	NRC	<a href="mailto:James.Webb@nrc.gov">James.Webb@nrc.gov</a>
Marla Morales	Center – SWRI	<a href="mailto:Marla.Morales@swri.org">Marla.Morales@swri.org</a>
Amy Snyder	NRC	<a href="mailto:Amy.Snyder@nrc.gov">Amy.Snyder@nrc.gov</a>
Pat Laplante	Center – SWRI	<a href="mailto:Plaplante@swri.org">Plaplante@swri.org</a>
Jim Prikryl	Center – SWRI	<a href="mailto:James.Prikryl@swri.org">James.Prikryl@swri.org</a>
Bradley Wherling	Center – SWRI	<a href="mailto:Bradley.Werling@swri.org">Bradley.Werling@swri.org</a>
Chandrika Manepally	Center – SWRI	<a href="mailto:Chandrika.Manepally@swri.org">Chandrika.Manepally@swri.org</a>
Femi Osidele	Center – SWRI	
Amy Hester	Center SWRI	
Miriam Junckett		
Jim Viellenave	AUC	<a href="mailto:jviellenave@auc-llc.com">jviellenave@auc-llc.com</a>
Dan Dowers	AUC	<a href="mailto:ddowers@auc-llc.com">ddowers@auc-llc.com</a>
Bob Meyer	AUC	<a href="mailto:rmeyer7@mindspring.com">rmeyer7@mindspring.com</a>



Ray DeLuna	AUC	rdeluna@treccorp.com
Ronn Smith	AUC	rsmith@imlinc.com
Darell Liles	Public – Senses Consultants	
Steve Brown	Public – Senses Consultants	
Jim Meyers	Center – SWRI	

**Attachment 2**  
**Meeting Agenda ML14261A341**

**Attachment 3**  
**NRC Talking Points ML14275A336**