



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

December 21, 2017

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

FROM: Douglas Mandeville, Project Manager /RA/  
Uranium Recovery Licensing Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Management  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: PUBLIC MEETING SUMMARY

On December 6, 2017, a Public Meeting was held via teleconference with Power Resources, Inc., doing business as Cameco Resources. The purpose of the meeting was to discuss Cameco's responses to the U.S. Nuclear Regulatory Commission (NRC) staff's request for additional information on Cameco's license renewal request for the Smith Ranch Highland facility. The list of attendees; meeting agenda; and meeting summary are enclosed.

Docket Numbers: 40-8964  
License Numbers: SUA-1548

Enclosures:

1. Meeting Summary
2. Meeting Attendees
3. Meeting Agenda

cc: Meeting Attendees (via email)

CONTACT: Douglas Mandeville, NMSS/DUWP  
(301) 415-0724

SUBJECT: PUBLIC MEETING SUMMARY  
DATE DECEMBER 21, 2017

**DISTRIBUTION:** GSuber

ADAMS Accession Number: ML17353A793

OFFICE	DUWP
NAME	D. Mandeville
DATE	12/21/17

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## MEETING SUMMARY

DATE: December 6, 2017

TIME: 1:00 p.m. to 2:00 p.m.

PLACE: Teleconference  
NRC staff participated from Two White Flint North, Room T8C5c at U.S. Nuclear Regulatory Commission Headquarters in Rockville, Maryland

PURPOSE: The purpose of the meeting was to discuss Cameco's responses to the NRC staff's request for additional information on Cameco's license renewal request for the Smith Ranch Highland facility.

ATTENDEES:

See List of Attendees (Enclosure 2).

BACKGROUND:

Power Resources, Inc., doing business as Cameco Resources (Cameco), currently operates the Smith Ranch Highland uranium in situ recovery facility in Wyoming. Smith Ranch Highland is authorized to operate by the U.S. Nuclear Regulatory Commission (NRC) under Source Material License SUA-1548. This license is currently in timely renewal.

The NRC staff issued its request for additional information (RAI) for Cameco's license renewal request on May 2, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML13098A040). Cameco submitted its responses to the NRC staff's request on November 18, 2014 (environmental report, ADAMS Accession Number ML14353A314) and April 21, 2015 (technical report, ADAMS Accession Number ML16063A418). The NRC staff documented its acceptance review of the RAI responses in a letter dated May 2, 2016 (ADAMS Accession Number ML16109A207). The NRC staff's acceptance review identified that Cameco provided sufficient information on 88 of the 115 RAI responses. The remaining 27 RAI responses do not provide the NRC staff with sufficient information to proceed with its review. Cameco and the NRC staff held a public meeting on April 6, 2017 to discuss Cameco's RAI responses related to hydrogeology (ADAMS Accession Number ML17345A154).

As a reminder, the State of Wyoming is in the process of becoming an NRC Agreement State for uranium recovery activities. The NRC staff issued a schedule letter which identified January 19, 2018 as a date for Cameco to resolve the remaining RAI responses so that the NRC staff can complete its review of the license renewal review prior to the turnover of its oversight responsibilities to the State of Wyoming (ADAMS Accession Number ML17174A904). The purpose of this public meeting was similar to the previous discussion on April 6, 2017 (ADAMS Accession Number ML17345A154) and allow Cameco to further discuss its approach in addressing the remaining RAIs that are related to hydrogeology issues. The NRC staff and Cameco have noticed a subsequent public meeting for Thursday December 21 to discuss the remaining RAI responses, which are primarily related to health physics.

Enclosure 1

DISCUSSION:

NRC staff read the opening statement for the meeting. Attendees of the meeting were asked to provide brief introductions. NRC staff provided an overview of the discussion topics planned for the meeting. Enclosure 3 contains the meeting agenda.

A summary of the key discussion points from the meeting is contained below. In this meeting summary, the RAI numbers correspond to the May 2, 2013, RAI package (ADAMS Accession Number ML13098A040). The NRC staff's May 2, 2016, letter (ADAMS Accession Number ML16109A207) provides a brief explanation of why Cameco's RAI responses were not sufficient.

**RAI 2**

This RAI relates to regional and local weather data and an assessment if that data is representative of long term conditions at and near the license area.

Cameco stated that it will have a third year of data collected from a nearby weather station soon. Cameco plans submit data to address the RAI.

**RAI 12**

This RAI relates to Cameco's proposed wellfields for operation over the duration of the proposed action and asks for a description of wellfields that have not previously been reviewed and approved by the NRC staff. For these wellfields that have not been previously reviewed and approved, Cameco needs to identify the wellfield location, target ore zone, as well as the overlying and underlying aquifers. NUREG 1569 identifies the information needed for the staff to be able to complete its review.

Cameco stated that the wellfields in question are typically located adjacent to existing well fields. Therefore, aquifer tests and water quality data is available.

The NRC staff commented that aquifer tests and cross sections that are representative of the ore zone would be helpful. The NRC staff also observed that Cameco can incorporate by reference and rely on existing reports to address this RAI.

**RAI 13**

This RAI relates to Cameco's desire to not monitor the underlying aquifer at Mine Unit 1 at Gas Hills. The NRC staff understands that the sand underlying Mine Unit 1 at Gas Hills may be the target ore zone in adjacent mine units. However, such a scenario would not preclude using the sand underlying Mine Unit 1 from being monitored.

Cameco has reviewed previous correspondence with the Wyoming Department of Environmental Quality (WDEQ) related to monitoring the underlying aquifer. Based on the previous correspondence with WDEQ, Cameco may be able to develop a response that addresses the NRC staff's RAI.

**RAI 17**

This RAI relates to the planned Mine Unit 5 at Gas Hills and identifying the target ore zone, the overlying aquifer, and the underlying aquifer. Given the presence of several open pit mines nearby, as well as a traceable fault, a better understanding of the hydrogeology in this area would be helpful for the NRC staff. The NRC staff recognizes that the hydrogeologic conditions in the area may evolve as various Wyoming Abandoned Mine Land (AML) projects proceed.

Cameco understands the issue.

**RAI 18**

This RAI relates to well completions in multiple horizons within an individual mine unit. Cameco stated that it may seek to pursue this approach in several mine units. The NRC staff recognizes that Cameco currently does complete wells in multiple horizons within an individual mine unit at Smith Ranch. The NRC staff is seeking a better understanding of this practice. For example, the RAI response should clearly explain where monitor wells will be located, how baseline water quality in the overlying and underlying monitoring wells will be established, how the ore zone will be isolated from the overlying and underlying aquifers, and Cameco's plans for restoring in stacked sands.

Cameco recognizes that information to address this RAI may already exist within its WDEQ permit for Smith Ranch Highland.

**RAIs 22 and 23**

These RAIs relate to the casing leak investigation (CLI) and Purge Storage Reservoir 2 (PSR-2) at Smith Ranch Highland. The NRC staff recognizes that both of these performance issues are well documented in ADAMS and that these two items have evolved significantly since the license renewal application was submitted. Sufficient information exists for the NRC staff to be able to describe these performance issues.

Cameco plans to develop a narrative description of its recent efforts related to these performance issues and how the CLI and PSR-2 are being addressed.

**RAIs 24 and 29**

These RAIs relate to the safety considerations for operations in an unconfined aquifer. The NRC staff observes that Cameco's RAI response explains that it does not plan to operate in an unconfined aquifer. However, the NRC staff recognizes that Cameco may wish to recover from an unconfined aquifer, if the economic incentive exists and it can be done while meeting the regulations.

During the discussion, the NRC staff stated the licensee needed to address the nine safety issues listed in the RAI and any other safety concerns associated with operations in an unconfined aquifer. NRC staff committed to provide examples of how other licensees have

addressed these safety concerns in an unconfined aquifer. Accession numbers for the various documents are provided below.

Uranerz Nichols Ranch

Uranerz Response to NRC Open Issues dated February 24, 2010 – ADAMS Accession Number ML100740143 (Package) and ML100740111 (document)

NRC staff final safety evaluation report (SER) dated July 19, 2011 – ADAMS Accession Number ML102240206

License SUA-1597, dated July 19, 2011, license condition 10.7 – ADAMS Accession Number ML111751649

Uranium One Moore Ranch

Uranium One Response to NRC RAI dated October 28, 2008 – ADAMS Accession Number ML090370721 (package) ML090370541 (document)

Uranium One Response to NRC Open Issues dated December 10, 2009 – ADAMS Accession Number ML093570297

NRC staff final SER dated September 30, 2010 – ADAMS Accession Number ML101310291

License SUA-1596, dated September 30, 2010, license condition 10.8 – ADAMS Accession Number ML102710425

**RAIs 31 and 32**

These RAIs related to operation of Mine Unit 5 at Gas Hills remote satellite and the possible interference of that operation on the approved alternate concentration limit at the adjacent UMETCO conventional uranium mill site. The NRC staff recognizes that Cameco's plans for operating the Gas Hills remote satellite have been impacted by the current uranium market. Cameco reviewed its correspondence with WDEQ related to Gas Hills Mine Unit 5 and plans to include additional information from that correspondence in its response to the NRC.

During the discussion, the NRC staff stated that it would provide the ADAMS Accession Number for UMETCO's alternate concentration limit (ACL) application. UMETCO's final ACL application, dated May 11, 2001 can be found under ADAMS Accession Number ML011490363 (Package).

**RAI 52**

This RAI relates to identification and information related to the wells currently used for the environmental monitoring program at Smith Ranch Highland.

Cameco has reviewed the version of the table that was provided to the NRC and plans to provide an updated table as part of its RAI response.

### **RAI 53**

This RAI relates to any private water supply wells (e.g. domestic, livestock) to be monitored that are located within 2 kilometers (km) of license SUA-1548. The NRC staff is asking for specific permit, well completion and well use information on all private wells within 2 km of each mine unit, not the license area.

Cameco is familiar with what type of information may be needed to address this RAI.

### **RAI 58**

This RAI relates to stability monitoring and demonstration of ground water stability after ground water restoration efforts are complete. The NRC staff's position is that ground water monitoring should continue until stability is demonstrated for 1 consecutive year.

Cameco recognizes that the NRC staff's position and can develop an RAI response that reflects its current approach towards ground water restoration.

Three members of the public participated in the meeting; however, there were no questions or comments from the public. Additionally, no paper copies of information was shared between Cameco and the NRC staff.

### **ACTION ITEMS:**

The following action items were identified during the meeting:

1. The NRC staff will complete the meeting summary within 30 working days.
2. The NRC staff would provide examples of licensees who have satisfactorily demonstrated the ability to operate in a confined aquifer. The NRC staff has provided several Accession Numbers in the discussion of RAIs 24 and 29. The NRC staff would provide the Accession Number for Umetco's ACL application. This Accession number is provided in the discussion related to RAIs 31 and 32.

While not an explicit action item, Cameco and the NRC staff discussed possible ways to provide submit the RAI responses. Given the aggressive schedule the NRC staff developed to complete the review, the NRC staff recognizes that a providing series of response submittals, when they are ready, would be a better alternative than waiting until all responses are complete before submitting.

The meeting concluded at approximately 2:00 p.m. Eastern Time.

Meeting Attendees  
Date: December 6, 2017  
Teleconference, NRC staff was located in room T8C5c  
1:00 p.m. to 2:00 p.m.

Topic: Discuss Response to NRC Staff Request for Additional Information on Smith Ranch  
License Renewal Request

NAME	AFFILIATION
Doug Mandeville	NRC
Elise Striz	NRC
Jim Park	NRC
Dave Brown	NRC
Larry Reimann	Cameco (via telephone)
Mike Beshore	Cameco (via telephone)
Jim Shriver	Cameco (via telephone)
Beth Frye	Cameco (via telephone)
Doug Pavlick	Cameco (via telephone)
Ruth Thomas	Environmentalists, Inc.
Sarah Fields	Uranium Watch
Ben Schiffer	WWC



PUBLIC MEETING AGENDA:

Technical meeting with Cameco to discuss response to NRC staff request for additional information regarding the Smith Ranch License Renewal

December 6, 2017 1:00 p.m. to 2:00 p.m.

Teleconference

NRC staff participating from T8C5c

MEETING PROCESS:

<u>Time</u>	<u>Topic</u>	<u>Lead</u>
1:00 p.m.	Introductions	All
	Opening Remarks	NRC
1:15 p.m.	Technical Discussion of Response to NRC Staff Request for Additional Information	NRC and Cameco
1:45 p.m.	Wrap Up, Review of Action Items	
1:50 p.m.	Questions from public to NRC (if any)	
2:00 p.m.	Adjourn	