

November 10, 2011

MEMORANDUM TO: Bill Von Till, Chief  
Uranium Recovery Licensing Branch  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

FROM: Douglas Mandeville, Project Manager */RA/*  
Uranium Recovery Licensing Branch  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

SUBJECT: PUBLIC MEETING SUMMARY

On October 18, 2011, a public meeting was held with Cameco Resources (Cameco), doing business as Power Resources, Inc., (PRI) at U.S. Nuclear Regulatory Commission NRC headquarters. The associated meeting notice was publicly noticed on NRC's public website on September 29, 2011, and is available at NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML112710137. The purpose of the meeting was to discuss PRI's potential alternate concentration limit (ACL) application for Mine Unit B. A summary of the meeting is enclosed.

Docket No: 40-8964  
License No: SUA-1548

Enclosure: Meeting Summary

cc: Meeting Attendees (via email)

CONTACT: Douglas Mandeville, FSME/DWMEP  
(301) 415-0724

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DISTRIBUTION: KMcConnell      BSpitzberg/RIV      LGersey/RIV  
Meeting Attendees via email)

**ML113080033**

OFFICE	DWMEP	DWMEP	DWMEP
NAME	DMandeville	BGarrett	DMandeville
DATE	11/ 8 /11	11/10/11	11/10/11

**OFFICIAL RECORD COPY**

## MEETING REPORT

DATE: Tuesday, October 18, 2011

TIME: 11:00 a.m. – 12:30 p.m.

PLACE: U.S. Nuclear Regulatory Commission  
11545 Rockville Pike, Room T8C5  
Rockville, Maryland 20852

PURPOSE: For Cameco and U.S. Nuclear Regulatory Commission (NRC) staff to discuss Cameco's potential alternate concentration limits application for Mine Unit B.

ATTENDEES: See Attendees List (Attachment 2).

### BACKGROUND:

Power Resources, Inc. (PRI), doing business as Cameco Resources (Cameco), is an NRC licensee currently operating the Smith Ranch-Highland Uranium Project, under NRC License SUA-1548. This License authorizes Cameco to use in situ recovery techniques to extract uranium from underground ore bodies. Condition 10.1.9.b of License SUA-1548 requires that Cameco submit a wellfield completion report for NRC review and approval upon completion of restoration activities in each wellfield. By letter dated June 26, 2009, Cameco submitted its Mine Unit B Ground Water Restoration Report for NRC approval. The report contained supporting data and related historical documentation leading to approval of the restoration by the Wyoming Department of Environmental Quality (WDEQ) between 2004 and 2008.

During the acceptance review, staff observed that one monitor well appeared to remain on excursion status at the completion of groundwater restoration. Additionally, the staff identified that there appeared to be pumping activities at several perimeter and overlying monitor wells during the stability monitoring period that were not fully described in the report. By letter dated September 29, 2009, the staff did not accept it for a detailed technical review. Since that time, Cameco has re-evaluated the groundwater restoration data for Mine Unit B and has decided to pursue a request for alternate concentration limits (ACLs) in this mine unit to accompany the revised report. This meeting was held to discuss Cameco's approach to the ACL application.

### DISCUSSION:

NRC staff read the opening statement for the meeting and the attendees proceeded with a discussion of Mine Unit B. One slide was presented by NRC staff at this meeting; this slide is included in Attachment 3. No members of the public were present for the meeting. Discussion topics from the meeting are presented below.

- Cameco provided a summary of the activities in Mine Unit B. Injection of lixiviant began in Mine Unit B in January 1988 and continued until July 1991. Restoration activities in Mine Unit B included groundwater sweep, treatment with reverse osmosis, and recirculation of fluids. Cameco considered groundwater restoration activities complete in Mine Unit B in June 2004. WDEQ approved groundwater restoration activities in Mine Unit B on March 28, 2008.
- Cameco indicated that the water quality for Mine Unit B has been determined on a wellfield average basis.
- Cameco asked about guidance documents for preparation of an ACL application. The staff commented that general guidance can be found in Appendix K of NUREG-1620, Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act. The staff plans to include guidance for ACL applications in the next revision of NUREG-1569.
- The staff identified that the standards for groundwater restoration can be found in 10 CFR Part 40, Appendix A, Criterion 5B(5). The factors that the staff can consider when considering alternate concentration limits at a facility are identified in 10 CFR Part 40 Appendix A, Criterion 5B(6). These regulations require that the proposed limit is as low as is reasonably achievable (ALARA), that practicable corrective actions have been employed, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the limit is not exceeded at the point of exposure.
- The staff described its concept for point of compliance (POC) and point of exposure (POE) monitoring wells at ISR facilities. During operation, the POC wells for the detection monitoring program are those located in the perimeter well ring and in the overlying and underlying aquifers, For purposes of restoration, the staff considers POC wells for a compliance monitoring program to be those located within the recovery area (former production area) and POE wells are located at the aquifer exemption boundary. This is shown on the figure in Attachment 3.
- The staff commented that an application for an ACL should explain or demonstrate how the hazardous constituents remaining in the mine unit are expected to behave in time and distance.
- The staff commented that an ACL application should clearly identify the aquifer exemption boundary for the particular mine unit. The staff observes that location of the aquifer exemption boundary is an important factor in determining potential impacts from an ACL.
- Cameco indicated that it plans to perform modeling to support the ACL application and is currently in the process of obtaining site-specific information for the model input. Cameco indicated that it plans to submit the ACL application in the first quarter of calendar year 2012.

ACTIONS: None

ATTACHMENTS

1. Agenda
2. List of Attendees
3. Figure 1 – Point of Compliance Monitor Wells at ISR Facilities

**MEETING AGENDA**  
**Cameco Resources, Inc.**  
**October 18, 2011**

**MEETING PURPOSE:** To discuss the potential alternate concentration limit (ACL) application for Mine Unit B at Cameco's Smith Ranch Highland in situ recovery facility.

**MEETING PROCESS:**

<u>Time</u>	<u>Topic</u>	<u>Lead</u>
11:00 a.m.	Introductions	All
	Discussion on ACL application Public Comments/Questions	All
12:30 p.m.	Adjourn	



**MEETING ATTENDEES**

U.S. Nuclear Regulatory Commission Headquarters  
Room T8C5.

October 18, 2011  
11:00 am to 12:00 pm

Topic: Cameco Resources Smith Ranch Highland *In Situ* Recovery Facility Potential  
ACL application for Mine Unit B

NAME	AFFILIATION
Douglas T. Mandeville	USNRC
John Saxton	USNRC
Chris Pugsley	Thompson & Pugsley, PLLC
Anthony J. Thompson	Thompson & Pugsley, PLLC
Larry Reimann	Cameco
Josh Leftwich	Cameco
Dan Erskine	Intera
Ron Linton	USNRC
Elise A Striz	USNRC
Bill VonTill	USNRC
Tom Lancaster	USNRC

Figure 1 – Point of Compliance Monitor Wells at ISR Facilities

