

April 4, 2013

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: John T. Buckley /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: SUMMARY OF JANUARY 31, 2013 MEETING WITH URANIUM ONE  
USA, INC. AND URANIUM ONE AMERICAS, INC.- REQUEST  
FOR ADDITIONAL INFORMATION ASSOCIATED WITH LUDEMAN  
ISR APPLICATION; RESTORATION REPORT, WILLOW CREEK  
PROJECT, CHRISTENSEN RANCH MINE UNITS 2-6

On December 5, 2011, Uranium One submitted a request to amend Source Material License SUA-1341 to construct and operate a uranium in situ leach uranium recovery facility at its Ludeman site in Converse County, Wyoming. The Technical and Environmental Reports supporting the license amendment request are publicly available in NRC's Agency-wide Documents Access and Management System (ADAMS).

The Technical Report was reviewed in accordance with the NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications," Final Report, June 2003, and the Environmental Report was reviewed in accordance with NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs," August 2003. The staff transmitted a request for additional information (RAI) to Uranium One on January 15, 2013 (ML12352A028), requesting information to supplement the information presented in the amendment application.

The meeting agenda is provided as Enclosure 1. The meeting began with an introduction of the meeting participants at 8:00 a.m. (see Enclosure 2). From approximately 8:15 – 11:00 a.m. the meeting participants discussed NRC's RAIs on the Ludeman Project Environmental Report (ML12352A032). In addition to discussing several specific RAIs, Uranium One discussed the possibility of revising the Ludeman surface facility layout presented in the application. Rather

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than having a surface facility associated with each of the satellites, Uranium One is evaluating the possibility of having one centrally located surface facility with pipelines connecting the wellfields.

At 11:00 a.m. the meeting participants had a one hour discussion regarding NRC's review of Uranium One's Restoration Report, Willow Creek Project, Christensen Ranch Mine Units 2-6. Uranium One representatives inquired of the meaning of the term "restoration plan" by NRC staff in the cover letter to the NRC Technical Evaluation Report (TER).

Specifically, Uranium One representatives requested clarification of NRC staff's expectations of Uranium One's responses to the TER. NRC staff clarified that the expected response was a workplan or additional data to address the comments in the TER and not a new comprehensive restoration plan. NRC further clarified that workplans may be specific to each wellfield. Uranium One representatives inquired if NRC staff discussed the TER with Wyoming Department of Environmental Quality (WDEQ) staff. NRC staff indicated the TER was not discussed in detail with WDEQ before publication, but NRC staff did have general discussions regarding restoration during regularly scheduled routine conference calls between NRC and WDEQ staff. Uranium One questioned the NRC staff's evaluation of the class-of-use standards discussed in the first three paragraphs on page 8 of the TER. Uranium One representatives inquired as to whether or not the conclusions were NRC staff's sole interpretation of WDEQ's regulations. NRC staff stated there were several internal discussions on the meaning of class of use with respect to applying it as an approved NRC standard.

Uranium One representatives asked that NRC staff review WDEQ's evaluation on the class of use as applied to the approved restoration for the Irigaray wellfields. This was an action item for NRC staff.

Subsequent to the public meeting, NRC staff reviewed documentation on the Irigaray restoration as part of the action item discussed above. A WDEQ letter to Ms. Wichers dated November 1, 2005 (ML060830597) indicates that the levels of the radiological parameters met background levels, which is consistent with NRC's interpretation for Christensen Ranch. Staff remains confident that the evaluation in the restoration report TER is consistent with WDEQ rules.

Uranium One representatives asked about applicability of 10 CFR 40.42 to wellfield restorations. NRC staff reiterated the policy as documented in RIS-09-05 (ML083510622).

Uranium One representatives asked about the word "demonstrate" as used in the TER. NRC staff did not prescribe in the TER how Uranium One needed to demonstrate compliance, and that Uranium One may elect its alternative to address NRC staff's concerns noted for a particular wellfield. For example, Uranium One may discuss existing data which was not present in the original restoration report, data that was possibly overlooked by staff during the restoration report review, new data obtained from existing wells since the restoration report was submitted, data from additional locations, or plans for additional restoration.

Uranium One questioned the significance of hot spot and significant increasing trend (SSI) analyses. NRC staff reiterated that the review of the data, including the verification calculations using numeric models, is based on the assumption that the average is representative of the aquifer conditions. A distribution with hotspots may invalidate an averaging method and any

SSI suggests that the calculated average concentration during the stabilization may not be representative.

From approximately 1:00 – 3:00 p.m. the meeting participants discussed NRC's RAIs on the Ludeman Project Technical Report (ML12352A030). The Action Items resulting from the discussions are provided in Enclosure 3.

Docket No.: 040-08502

Enclosures:

1. Agenda
2. Participant List
3. Meeting Action Items

SSI suggests that the calculated average concentration during the stabilization may not be representative.

From approximately 1:00 – 3:00 p.m. the meeting participants discussed NRC's RAIs on the Ludeman Project Technical Report (ML12352A030). The Action Items resulting from the discussions are provided in Enclosure 3.

Docket No.: 040-08502

Enclosures:

1. Agenda
2. Participant List
3. Meeting Action Items

DISTRIBUTION:

Meeting Attendees      LGersey/RIV      BSpitzberg/RIV

**ML13036A015**

Office	DWMEP	DWMEP	DWMEP	DWMEP	DWMEP
Name	JBuckley	JSaxton	BGarrett	RLinton	JBuckley
Date	02/19 /13	02/19 /13	02/21 /13	02/21 /13	04/4/13

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MEETING AGENDA  
Uranium One USA, Inc., Uranium One Americas, Inc.  
January 31, 2013, Room T8C1  
8:00 am. 12:00 am, 1:00 pm. - 3:00 pm.

MEETING PURPOSE: To Discuss NRC Request for Additional Information – Ludeman Project  
  
To Discuss NRC Review – Restoration Report, Willow Creek  
Project, Christensen Ranch Mine Units 2-6

MEETING PROCESS:

Time	Topic	Lead
8:00 a.m.	Introductions	Buckley
8:10 a.m.	Discussion of Ludeman Project Environmental RAIs	Jamerson/ Park/Caverly
10:00 a.m.	Break	
10:15 a.m.	Discussion of Ludeman Project Technical RAIs	Buckley/Striz/ Oxenberg/Mandeville
11:00 a.m.	Discussion of NRC Review – Restoration Report, Willow Creek Project, Christensen Ranch Mine Units 2-6	Saxton
Noon	Lunch Break	
1:00 p.m.	Discussion of Ludeman Project Technical RAIs	Buckley/Striz Oxenberg/Mandeville
2:30 p.m.	Summary of Action Items	Buckley
2:45 p.m.	Public Comment/Questions	Buckley
3:00 p.m.	Adjourn	

## **Participant List**

### Nuclear Regulatory Commission

John Buckley  
Elise Striz  
John Saxton  
Jill Caverly  
Jim Park  
Kellee Jamerson  
Tanya Oxenberg  
Doug Mandeville  
William Von Till  
Kathryn Johnson (contractor)  
Doris Miner (contractor)

### Uranium One Americas, Inc.

Jon Winter  
Donna Wichers  
Bill Kearney

### Members of the Public

John Cash (UR Energy)

### **Action Items**

1. NRC will provide Uranium One the name of the reviewer who generated each Environmental and Technical RAI.
2. NRC will schedule a meeting to discuss Uranium One's draft responses to the Environmental and Technical RAIs. This will be a publicly noticed meeting.
3. Uranium One representatives asked that NRC staff review WDEQ's evaluation on the class of use as applied to the approved restoration for the Irigaray wellfields.