

March 23, 2017

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: Elise Striz, Project Manager */RA/*  
Uranium Recovery Licensing Branch  
Division of Decommissioning, Uranium Recovery  
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Office of Nuclear Material Safety  
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SUBJECT: PUBLIC MEETING SUMMARY

On February 22, 2017, a public meeting was held with Uranium One USA, Inc. at U.S. Nuclear Regulatory Commission Headquarters. The purpose of the meeting was to discuss Health Physics Requests for Additional Information (RAIs), Open Issues, and the amended application required to complete the Environmental Assessment (EA) and the Safety Evaluation Report (SER) for the Ludeman Project Amendment. A summary of the meeting is enclosed.

Enclosure: Meeting Summary

cc: Meeting Attendees (via email)

CONTACT: Elise Striz, NMSS/DUWP  
(301) 415-0708

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DISTRIBUTION: JTappert, AKock

Meeting Attendees

**ML17072A180**

OFFICE	DUWP	DUWP	FSCE/ERB	DUWP
NAME	EStriz	SAchten	KJamerson	EStriz
DATE	3/16/17	3/16/17	3/17/17	3/23/17

**OFFICIAL RECORD COPY**

## MEETING REPORT

DATE: February 22, 2017

TIME: 1:00 p.m. to 4:00 p.m.

PLACE: U.S. Nuclear Regulatory Commission  
Two White Flint North, Rockville, Maryland  
Room TWFN 8C05C

PURPOSE: The purpose of the meeting was to discuss Health Physics Requests for Additional Information (RAIs), Open Issues, and Amended Application for Ludeman Project Amendment.

ATTENDEES:

See Attendees List (Attachment 1).

BACKGROUND:

Uranium One USA, Inc. (UO) submitted the Ludeman Project amendment request for the Willow Creek Project license SUA-1341 on December 3, 2011 (NRC's Agencywide Documents Access and Management System (ADAMS) Accession number ML12010A178). After submission of required information, the NRC staff found the application acceptable for review on May 16, 2012 (ML12131A322). The NRC staff issued requests for additional information (RAIs) for the safety and environmental review on January 15, 2013 (ML12352A028, ML12352A030). On April 10, 2013, UO submitted a "change of design" request for the Ludeman Project Expansion (ML13106A238). In this request, UO committed to amend the application to address the proposed "change of design" modifications at a later date. NRC agreed to UO's request to defer submission of the "change of design" amended application to enable UO to include application revisions based on acceptable responses to RAIs. UO submitted almost all of the responses to RAIs on March 13, 2014 (ML14079A127). After a delay of a few months due to the NRC Health Physics (HP) staff working on other high-priority projects, the NRC staff was able to review the HP RAI responses and issued a second round of targeted HP RAIs on December 18, 2014 (ML14350A186). UO responded to the second round of targeted HP RAIs and other remaining RAIs on June 8, 2015 (ML15170A372).

The NRC staff is currently conducting the safety and environmental review of the Ludeman Project Application with the available information provided on expected revisions for the "change of design" request and the RAI responses. The review of some of the Ludeman HP safety RAI responses, however, are awaiting more information from the applicant. Specifically, the Ludeman Project amendment application does not include a description of several elements of the HP program. In addition, the NRC staff is also unable to complete its safety review or environmental assessment due to existing unresolved open issues from the February 8, 2016, public meeting (ML16061A330) and new open issues. The NRC staff has also informed UO of deficiencies in its Class III Cultural Resource Inventory report that must be addressed prior to the Wyoming State Historic Preservation Officer review. Revisions to the report are critical for the NRC staff to complete its National Historic Preservation Act Section 106 review. To avoid

further delay, NRC requested this public meeting to address the remaining HP RAIs and Ludeman application open issues, as well as to discuss the required structure and content of the amended application UO will need to submit to enable NRC staff to complete the safety and environmental review.

#### DISCUSSION:

NRC staff read the opening statement for the meeting. Attendees of the meeting were asked to provide brief introductions and sign the attendance sheet (Attachment 1). NRC staff provided an agenda for the meeting (Attachment 2).

NRC staff began the meeting by asking UO for an update on the progress of preparing its response to the outstanding HP RAIs which address License Conditions (LC) 11.3 and 11.9 of the overarching Willow Creek License, upon which the Ludeman HP program depends. UO stated it has completed the response for LC 11.3 and is nearing completion on the response to LC 11.9. Further discussion ensued concerning the content of the pending RAI responses to ensure they would be acceptable and complete to enable the NRC safety review of the Ludeman HP program to advance.

The NRC staff then presented several major open issues which require resolution. The first issue was the clarification of the liquid waste disposal action and alternatives. UO stated the primary liquid waste disposal action under consideration was the use of evaporation and restoration permeate ponds with surface water discharge and no deep disposal wells. The first alternative would be evaporation and restoration permeate ponds with surface water discharge and up to six deep disposal wells. The second alternative would be surge ponds with up to six deep disposal wells. The NRC staff asked UO to provide the expected location, flow rate and water quality of the surface water discharge. The next issue was to seek assurance that UO agreed that although Wellfield 2 is described in the application, the NRC staff would not include its operation as part of the licensing action as it was not sufficiently characterized for either the safety or environmental review. UO agreed that it would provide language stating it was not requesting approval of Wellfield 2 operation at this time. It stated it would provide a statement to this effect in the application and would request an amendment for the operation of Wellfield 2 after this licensing action. The next major issue was the presence of a large water body within a region defined by FEMA as a 100 year flood hazard feature in portions of Wellfield 5. NRC staff requested that UO provide language in the application which states they would not install injection or production wells within this water body feature. NRC staff emphasized that injection and production well heads cannot be submerged for any period of time as this interferes with critical wellfield spill and leak detection systems and inspection of those systems. UO stated it would review the behavior of this water body feature in Wellfield 5. It would provide an answer to this request from NRC based on this assessment.

NRC staff next informed UO that it had not provided a groundwater monitoring plan for the proposed design of the liquid waste disposal evaporation and permeate ponds. NRC staff requires this monitoring plan, including the location of groundwater monitoring wells and a well sampling plan, to complete its safety review of the pond design. NRC also informed UO that although it had provided a listing of all groundwater well permits in the license area, it needed to provide the location, completion interval, current use and rate of all private wells within 2 km of each wellfield. NRC informed UO that these wells would require monitoring during all phases of

operation. In addition, UO needed to provide a mitigation plan for any private well impacted by drawdown from wellfield operations. UO agreed to provide the requested information on all of these items.

Several other open issues were discussed including clarification of wellfield nomenclature in the application; volumes of non-hazardous and 11e(2) solid waste solid waste to be generated at the facility; updated waterbody features and soil maps; the location of any springs in the license area; the location and description of drilling water sources; location and completion interval for any facility potable or public water supply wells; submission of electronic files of on-site meteorological data; and commitments with respect to preconstruction activities. NRC staff also requested additional information on the air emissions inventory and assessment of air quality impacts; however, UO stated it had already provided the majority of the information to NRC in an updated report in September 2016. NRC confirmed the submission and stated it would review the updated report and let UO know if any further information was required.

NRC staff and UO then discussed the current status and content of the amended application. UO stated that the amended application was 80% complete. NRC staff informed UO of specific information that must be included in the amended application to be acceptable and enable NRC staff to complete the SER and EA. These items included all “change of design” modifications, all text and application revisions based on RAI responses and open issue resolution; all updated figures, tables, reports, appendices; and any other modifications made since the initial submittal. UO agreed the amended application would include these items.

The NRC staff then asked UO if it had addressed the deficiencies in its Class III Cultural Resource Inventory report as requested to advance the Wyoming State Historic Preservation Officer (SHPO) review. UO stated their contractor had engaged in discussions with the SHPO and they were in the process of making the noted revisions to the Class III Cultural Resource report.

At the end of the meeting, NRC informed UO it will issue a schedule letter stating that in order for the NRC staff to proceed with its safety and environmental reviews and establish a revised schedule for completion of the Ludeman license amendment request, UO should provide an updated schedule for submitting the required information. The updated schedule should also address when UO intends to submit the amended Ludeman Project application, including the “change of design” request and any revisions based on RAI and open issue action item responses. The NRC staff asked that UO provide a schedule within 30 days of receipt of this letter. NRC informed UO that once it has provided the information and the RAI and open issue action item responses are determined to be sufficient, the NRC staff will be able to refine the schedule for the remainder of the review.

No members of the public were in attendance at the meeting. The meeting concluded and adjourned at approximately 3:55 p.m. Eastern time.

## ACTION ITEMS

During the meeting, several specific action items to be addressed by UO were initiated. They are listed below:

1. Please provide the likely location of proposed Wyoming Pollution Discharge Elimination System (WPDES) surface water discharge and its proximity to the nearest drainage. Please provide the expected water quality of the surface water discharge from the proposed permeate ponds and the expected rate and total volume of discharge.
2. Please provide the expected non-hazardous and 11e (2) byproduct waste volumes for the construction, operational and decommissioning phases.
3. Please provide the language to be included in the amended application that states that Wellfield 2, although described in the application, has not been sufficiently characterized for the current safety or environmental review; therefore, UO agrees Wellfield 2 will not be installed or operated as part of this licensing action. Please state UO will request a license amendment to obtain approval to operate Wellfield 2 at a later date. Please also provide the area of disturbance associated with installation and operation of Wellfield 2.
4. Please provide further characterization of the water body associated with the FEMA 100 year flood hazard zone within Wellfield 5 and submit plans to avoid installation of any injection and production wells within this zone.
5. Please provide an updated wetland and water body figure which excludes the names and locations of all water bodies and wetlands that lie within the excluded areas (e.g. Chapman University, BLM) which have been removed from the original proposed license boundary. Please also provide the names and total acreage of the wetlands/water bodies which have been removed as part of this action.
6. Please provide an updated soils maps with a corrected legend and soil disturbance acreage.
7. Please provide the expected location of the drilling water source for each wellfield separately. If it is an existing well, please provide well permit/name and completion sand interval (e.g. 60 sand). If it is an existing surface water source, please identify with permit or water body name. If a new well, please provide expected location and completion sand interval (e.g. 90 sand).
8. Please provide the expected location of any potable or public water supply well to be used at the facility. If it is an existing well, please provide well permit/name and completion sand interval (e.g. 60 sand). If a new well, please provide expected location and completion sand interval (e.g. 90 sand).
9. Please provide the depth below ground surface to the surficial aquifer under the proposed evaporation and permeate ponds.
10. Please provide a groundwater monitoring plan for the evaporation and permeate ponds including the location and completion interval of dedicated monitoring wells in the surficial aquifer, the constituents to be monitored and the frequency of the monitoring.
11. Please provide the name, permit number, location, completion interval (e.g. 80 sand), current rate and use of all private wells within 2 km of each wellfield separately.
12. Please provide a mitigation plan for any private well which may be impacted by water level drawdowns associated with wellfield or facility operation.

13. Please provide language to be included in the amended application that states that there are currently no plans to undertake preconstruction activities before the license is granted.
14. Please send the electronic database with the hourly met station site data.

Attachments:

1. List of Attendees
2. Meeting Agenda

Meeting Attendees  
Date: Monday February 22, 2017  
Room TWFN 08C05C  
1:00 pm to 4:00 pm

Topic: To discuss Health Physics Requests for Additional Information (RAIs), Open Issues, and Amended Application for Ludeman Project Amendment Environmental Assessment (EA) and the Safety Evaluation Report (SER).

<b>NAME</b>	<b>AFFILIATION</b>
Elise Striz	U.S. NRC
Kellee Jamerson	U.S. NRC
David Brown	U.S. NRC
Cinthy Roman	U.S. NRC
Scott Schierman	Uranium One USA
Greg Kruse	Uranium One USA
Marla Morales	CNWRA (contractor to NRC)
Patrick LaPlante	CNWRA (contractor to NRC)
Amy Minor	CNWRA (contractor to NRC)
Cynthia Dinwiddie	CNWRA (contractor to NRC)
Miriam Juckett	CNWRA (contractor to NRC)
Bradley Werling	CNWRA (contractor to NRC)
Ray Deluna	Woodard and Curran, TREK (contractor to Uranium One USA)
Ron Smith	Intermountain Lab (contractor to Uranium One USA)



MEETING AGENDA  
Uranium One USA Ludeman ISR Application Feb. 22, 2017  
1:00 p.m. – 4:00 p.m.

NRC Two White Flint North, TWFN 8C05C  
11545 Rockville Pike  
Rockville, MD

MEETING PURPOSE: To discuss Health Physics Requests for Additional Information (RAIs), Open Issues, and Amended Application for Ludeman Project Amendment Environmental Assessment (EA) and the Safety Evaluation Report (SER).

MEETING PROCESS:

<u>Time</u>	<u>Topic</u>
1:00 p.m.	Introductions, Opening Remarks
1:05 p.m.	Discussion of Health Physics RAIs
2:00 p.m.	Discussion of Open Issues
3:00 p.m.	Content of and Timeline for Submission of Amended Application
3:45 p.m.	Public Comments
4:00 p.m.	Closing Remarks, Adjourn