

November 6, 2012

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

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

SUBJECT: SUMMARY OF SEPTEMBER 25 THROUGH 27, 2012, SITE VISIT  
AND PRE-SUBMISSION AUDIT OF LICENSE RENEWAL  
APPLICATION, HYDRO RESOURCES, INC., CROWNPOINT  
URANIUM PROJECT, LICENSE NO. SUA-1580

From September 25 through 27, 2012, U.S. Nuclear Regulatory Commission (NRC) staff met with representatives of Hydro Resources, Inc. (HRI) to visit the four properties that comprise the Crownpoint Uranium Project and to perform a pre-submission audit of HRI's license renewal application for License SUA-1580. The meeting was publicly noticed on the NRC's public website on September 11, 2012, and the notice is available at NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML12192A055. A summary of the meeting is enclosed.

Docket No: 040-08968

Enclosure: Meeting Summary

CONTACT: R. Linton, FSME/DWMEP  
(301) 415-7777

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DISTRIBUTION:

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Meeting Attendees

LGersey/RIV

APersinko

**ML12290A771**

Office	DWMEP	DWMEP	DWMEP	DWMEP	OGC	DWMEP
Name	RLinton	BGarrett	AWaldron via e-mail	JParkvia e- mail	BJones	RLinton
Date	10/ 18 /12	10/ 18 /12	10/19 /12	10/19 /12	11/ 01 /12	11/6/12

**OFFICIAL RECORD COPY**

## MEETING REPORT

**DATES:** Tuesday, September 25, through Thursday, September 27, 2012

**TIME:** See agenda (Attachment1)

**PLACE:** Hydro Resources, Inc.  
Crownpoint Uranium Project  
Section 8, Section 17, Unit 1, and Crownpoint

**PURPOSE:** This three-day meeting was for the NRC staff to visit the U.S. Nuclear Regulatory Commission (NRC) licensed Hydro Resources, Inc. (HRI) Crownpoint Uranium Project *in situ* recovery (ISR) site. The NRC staff reviewed HRI's proposed license renewal application, prior to its submission to the NRC for full review, to identify potential major acceptance or technical review issues.

**ATTENDEES:** See Attendees List (Attachment 2).

### BACKGROUND:

HRI was issued an NRC source and byproduct materials license for ISR uranium production on January 5, 1998, for a 5-year term. In September 2002, NRC requested renewal of its license. Shortly thereafter, the NRC placed the license in timely renewal status and it remains currently in that status. The NRC's initial issuance of the license in 1998 was subjected to extensive litigation which ended in November 2010. During that time, the NRC staff held its review of the license renewal application in abeyance. After the litigation ended, HRI notified the NRC that it wanted to proceed with the license renewal. HRI and NRC staff have been discussing the renewal process since the litigation ended. HRI requested the NRC staff perform a pre-submission review audit of its proposed revision to its license renewal application.

### DISCUSSION:

The meeting announcement was placed in NRC's Agencywide Documents and Management System (ADAMS) on September 6, 2012, and publicly announced on September 11, 2012, on NRC's public website.

#### September 25, 2012:

At 8:00 a.m., the NRC staff, HRI staff, and contractors, Navajo Nation staff, New Mexico Environment Department staff, and members of the public met at Red Rock Park in Churchrock, New Mexico. NRC staff read the opening statement for the meeting (Attachment 3). The staff explained that the three-day meeting would include site visits on September 25 and a review of the application on September 26 and 27, followed by a debrief of the staff's recommendations. NRC staff made it clear that no regulatory decisions would be made during the pre-submission audit. Members of the public were invited to attend the site tour and observe the application review. However, the staff informed the meeting attendees that members of the public would not be allowed to view the application itself, as it is a pre-submission document. Furthermore, the application will also not become part of the meeting summary, because the application was not distributed to meeting attendees or removed from the premises by meeting attendees.

Enclosure

At 9:00 a.m., the NRC staff, HRI staff and contractors, Navajo Nation staff, New Mexico Environment Department staff, and members of the public began touring Section 8 and Section 17. Participants spent considerable time walking Section 8 and Section 17. In the afternoon, participants toured Unit 1 and Crownpoint.

#### September 26, 2012:

At 8:15 a.m., NRC staff began touring Section 8 and Section 17 with HRI staff and the New Mexico State Historic Preservation Officer. This was a non-public meeting. At 1:00 p.m., NRC staff began reviewing the application at HRI's Crownpoint office. NRC staff read the public meeting statement (Attachment 3) for a second time.

#### September 27, 2012:

Beginning at 8:30 a.m., NRC staff continued its review of the application at HRI's Crownpoint office. Staff completed its review and started the debrief at 5:00 p.m. Members of the media were present for the debrief.

#### Debrief Notes:

The NRC staff reviewed significant sections of HRI's consolidated operations plan (COP) and environmental report (ER). The staff summarized its findings by major topics and issues, noting that many other comments were provided in the application itself. The NRC staff noted to HRI staff that the pre-submission audit is not a guarantee that the application would be accepted for review if and when it is submitted. The NRC staff specific comments are summarized as follows:

#### Consolidated Operations Plan

- HRI should ensure that no cultural resource sites are shown on maps that need to be made publicly available. Separate maps should be submitted that contain cultural resource sites with a request that they be made non-public under 10 CFR 2.309.
- Maps of wellfields and restoration schedules do not contain the same information. For example, Figure 1.4-6 and the restoration schedules are not aligned.
- HRI discussed stacked roll fronts in the site visits, but they are not discussed in the COP. NRC staff asked if stacked roll fronts require any unique monitoring.
- HRI should be consistent on how restricted areas and controlled areas are discussed or defined in the COP; they should be consistent with 10 CFR Part 20 definitions.
- HRI should ensure that the Radiation Safety Officer (RSO) is a member of the Safety and Environmental Review Panel.

- HRI should commit in the COP to provide an annual review of Standard Operating Procedures by the RSO, as appropriate.
- HRI should consider injection and production well set-backs from arroyos on Section 8 and Section 17, and consider a commitment to not construct injection and production wells within active arroyos.
- HRI should consider discussing properties in parallel order in the COP. For example, HRI should discuss Section 8, Section 17, Unit 1, and Crownpoint in the same order in different sections of the COP. The different order of these properties in different sections was confusing for the reader.
- HRI should consider making a decision on the location of the central processing plant and if satellite plants will ship resin or slurry.
- HRI should consider providing a table that cross references to locations of past HRI analyses or documents that provide support for statements made in the COP. This “roadmap” will help potential new reviewers sift through a voluminous record that has already been provided to the NRC for the initial licensing and Atomic Safety and Licensing Board review. NRC NUREG-1569, “Standard Review Plan for In Situ Leach Uranium Extraction License Applications,” is the guidance document staff will use to guide its review of the application and HRI should ensure that technical subjects in the standard review plan are addressed, or have been addressed in past evaluations.
- HRI should consider focusing on one waste disposal option for staff to evaluate. This will allow staff to evaluate the water balance for one option versus several.
- NRC staff may request that HRI provide production area hydrologic test documents or wellfield packages for NRC staff verification.
- NRC staff suggests that HRI ensure that environmental monitoring is consistent with NRC Regulatory Guide 4.14, “Radiological Effluent and Environmental Monitoring at Uranium Mills.”
- NRC staff suggests HRI look at recent NRC licenses for conditions that NRC staff may require in the license.
- HRI should consider using larger maps as the 8.5” x 11” maps were very hard to read when large areas were represented.
- HRI should provide references in the COP text where appropriate. There was a reference list in the back of the COP, but few, if any, references were tied into the technical information supplied in the COP.
- NRC staff did not review meteorological data in detail.

## Environmental Report

- HRI should re-examine the stated need for the license renewal as it may not be supportable as written.
- HRI should ensure that maps have appropriate key or legends, and a reader can clearly distinguish various parts of maps.
- Use consistency throughout ER for clarity, with respect to wording throughout the document (e.g., arroyo, channel, and drainage; and satellite, project area and location).
- Throughout the document, the various properties that HRI will operate are sometimes referred to as “three” locations and sometimes “four.” HRI should choose one way to describe locations, to avoid any confusion.
- HRI should provide additional background and support for the ER’s statement (p. 6) that the acreages for the Church Rock, Unit One, and Crownpoint properties were erroneously reported in the 1997 Final Environmental Impact Statement (FEIS).
- HRI should be more specific as to the detailed aspects of its proposed action. For example, ER discussion on pages 6-7 and elsewhere indicate that HRI is considering various options to: (1) the level of uranium processing at each property; (2) where yellowcake production would occur; (3) the potential for equivalent feed materials to be processed at a Crownpoint Central Processing Plant; and (4) the manner in which waste waters will be processed and treated.
- HRI should re-examine the schedules indicated for each phase of ISR operations at the respective properties. Such schedules should be reasonable in light of HRI experience and overall ISR industry experience in well field development, operation, aquifer restoration, and well field decommissioning.
- HRI should clarify the total surface disturbance from ISR operations for each of the properties. The FEIS presented total surface disturbance expected from ISR operations for each property, while the supplemental ER presents only the “initial” expected level of surface disturbance.
- HRI should clarify the number of well fields expected to be developed at each property. In Section 2.1.3.3.3, the ER states the anticipated number of metering houses (i.e., header houses), but doesn’t discuss the number of well fields anticipated.
- HRI should use more up-to-date precipitation data (more recent than 1931-1960).
- HRI should state in Section 3.6.2.2, if McKinley County is in attainment, or not, for National Ambient Air Quality Standards.

- HRI should clarify its discussion of cumulative impacts so as to be more specific to each of the properties. Currently, the ER (pp. 40-44) discusses cumulative impacts from the overall Crownpoint Uranium Project-level.
- HRI should re-examine the commitments made in the ER to ensure such commitments are consistent with HRI's philosophy and expectations for the Crownpoint Uranium Project.
- With respect to discussions of land use, HRI should clarify: (1) the extent of grazing restrictions within each site's boundaries during ISR operations; (2) the length of time allottees in Unit One would be re-located from their homes due to ISR operations; (3) any impacts to current allottee restrictions under the No-Action alternative; and (4) how it intends to re-contour all disturbed areas and drainage channels to pre-construction topography and conditions.
- Concerning transportation impacts (p. 268), HRI identifies License Condition 9.8, but then states other commitments that are not part of that license condition. HRI should clarify this discussion.
- Regarding geology and soils, HRI mentions that the U.S. Geologic Survey (USGS) did not provide any new information regarding regional or local geology. HRI should clarify whether its own further site investigations have modified its understanding of the subsurface geology.
- Consumptive use of groundwater (e.g., for construction drilling, wetting soils, production bleed, in the use of high efficiency reverse osmosis) is discussed in various sections of the ER. HRI should clarify the amounts of water used at each property for these purposes and compare/confirm that these levels are within HRI's granted water rights.
- HRI should determine if any air modeling is needed due to proximity to any Prevention of Significant Deterioration Class I sites.
- HRI should clarify in Section 4.5.1.1.1, if and when a follow-up survey for black-footed ferret would be necessary.
- In Section 4.5.1.2.4, HRI should clarify why and how it would need to restore arroyos.
- HRI should also re-evaluate its socioeconomics impact conclusion that was reached for the No-Action alternative.
- HRI should be more specific as to any power distribution lines (number and location) that the four sites would require.
- With respect to environmental monitoring (Chapter 6 of the ER), HRI should clarify how the proposed locations of sampling sites and frequency of sampling compare to that recommended in NRC Regulatory Guide 4.14. If HRI's program differs from that in the

Regulatory Guide, HRI should ensure that its application contains adequate justification for its proposed alternative monitoring program. Additionally, this ER chapter mentions a Cultural Resource Management Plan. NRC recommends that HRI include broad involvement from local Native American Tribes as part of the development of the plan.

- HRI should clearly define where the erosion and sedimentation mitigation measures will be used.
- HRI should provide a list of measures that will be used to control dust in the mitigation section.
- HRI should clarify in Section 7.7, what it means by “public costs.”

**ACTIONS:**

NRC staff will provide a meeting summary within 30 working days of September 27, 2012.

The debrief meeting adjourned at 6:30 p.m.

**ATTACHMENTS:**

1. Agenda
2. List of Attendees
3. Meeting Statement

**Hydro Resources, Inc.  
 Crownpoint Uranium Project  
 Site Visit and License Renewal Pre-Submission Review  
 September 25 – 27, 2012  
 Crownpoint, New Mexico**

**AGENDA**

**September 25, 2012**

<b>Time (approximate)</b>	<b>Topic/Location</b>	<b>Speaker</b>
8:00 a.m.	Introduction – Red Rocks State Park parking lot	NRC staff / HRI staff
9:00 a.m.	Site Visit – Section 8 and Section 17	NRC staff / HRI staff
noon	Lunch – on your own	
1:00 p.m.	Site Visit – Unit 1	NRC staff / HRI staff
2:00 p.m.	Site Visit – Crownpoint	NRC staff / HRI staff
various	Opportunity for Questions – all stops	Public
4:00 p.m.	Adjourn	

**September 26, 2012**

<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
1:00 p.m.	Introductions and License Renewal Application Review – HRI Crownpoint office	none
6:00 p.m.	Adjourn	

**September 27, 2012**

<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
8:00 a.m.	License Renewal Application Review – HRI Crownpoint office	none
4:00 p.m.	License Renewal Application Review Debrief	NRC staff / HRI staff
5:00 p.m.	Opportunity for Questions	Public
5:30 p.m.	Adjourn	



## MEETING ATTENDEES

Date: September 25-27, 2012

Topic: Hydro Resources, Inc., Crownpoint Uranium Project, Site Visit and License Renewal Pre-Submission Review

NAME	AFFILIATION
Ron Linton	NRC
Jim Park	NRC
Ashley Waldron	NRC
Mark Pelizza	Hydro Resources (HRI)
Rick VanHorn	Hydro Resources (HRI)
Anthony J. Thompson	Thompson & Pugsley
Christopher Pugsley	Thompson & Pugsley
Salvador Chavez	Uranium Resources, Inc. (URI)
Davey N Morris	Allottee
Irma Julian	Allottee
Adela M. Duran	Comeau, Maldegen, Templeman & Indall, LLP
Melissa Meirink	Greenberg Traurig
John Berry	WWC Engineering
Mike Neumann	URI
Dana Stotsky	Navajo Nation DOJ
Georges Scott	DW Turner
Jonathan Perry	Becenti Chapter
James Morgan	Becenti Chapter
Wynoma Foster	Becenti Chapter
Kathy Helms	Gallup Independent
Alastair Bitsoi	Navajo Times
David Mayerson	New Mexico Environment Department

**OPEN MEETING OPENING STATEMENT**  
**Site visit and pre-submission audit, Hydro Resources, Inc.**  
**September 25-27, 2012**

This is an open meeting, held between the Nuclear Regulatory Commission and Hydro Resources, Inc., (HRI) an NRC licensee.

The purpose of this three-day meeting is for the NRC staff to visit the NRC licensed Hydro Resources, Inc. (HRI) Crownpoint Uranium Project in situ recovery (ISR) site. The NRC staff will also review HRI's license renewal application, prior to its submission to the NRC for full review, to identify potential major acceptance or technical review issues.

The meeting was publically noticed on September 11, 2012 on NRC's public website.

No regulatory decisions will be made during this pre-submission audit.

Members of the public may attend the site visits and observe the NRC staff's pre-submission audit of HRI's license renewal application. Questions from the public will be solicited by NRC staff at various times during the site visits, as time permits. Questions from the public will be solicited by NRC staff at the end of the pre-submission audit meeting.

Members of the public cannot view HRI's license renewal application, as it is a pre-submission and nonpublic document. HRI's license renewal application will not become part of the meeting record, since it will not be distributed to the public or removed from HRI offices by the NRC staff. The public is invited to observe the pre-submission audit and may ask questions at the end of the business portion of the meeting. Representatives of HRI are encouraged, but not required, to answer questions directed to them by members of the public.

There is no space limitation for attendance during the September 25, 2012 site visit. Participants will need to provide their own transportation. Space at the HRI Crownpoint office is very limited for September 26 and September 27, 2012 pre-submission audit; therefore, public attendance will be limited.

A report of this meeting will be prepared by NRC staff and this report will be placed in the docket file 040-08968 and the public document room. The meeting report will include a summary of discussion topics and a list of action items. At the close of the meeting, we will review the list of action items, responsible parties, and due dates to ensure agreement has been reached and there are no misunderstandings.

Our goal is to have the meeting report completed within thirty (30) working days.

Attachment 3