

June 15, 2010

Mr. Richard L. Currit  
Senior Archaeologist  
Wyoming State Historic  
Preservation Office  
2301 Central Avenue  
Barrett Building, Third Floor  
Cheyenne, WY 82002

SUBJECT: URANERZ ENERGY CORPORATION, NICHOLS RANCH IN-SITU URANIUM  
RECOVERY PROJECT – SECTION 106 CONSULTATION – STATE HISTORIC  
PRESERVATION OFFICE FILE #0708RLC009

Dear Mr. Currit:

With this letter, the U.S. Nuclear Regulatory Commission (NRC) is forwarding you the *Anadarko Petroleum Corporation Dry Willow Phase 4 POD Class III Cultural Resource Inventory Campbell County, Wyoming*, prepared by Arcadis U.S., Inc. in July 2008. In a phone conversation with the NRC on March 3, 2010, you requested a copy of this survey in order to continue your review of the effects of the proposed Nichols Ranch In-Situ Recovery (ISR) Project (the undertaking) on historical properties required by Section 106 of the National Historic Preservation Act (NHPA).

For your reference, the NRC has also included background on the NRC's activities pursuant to Section 106 to date, as well as updates to the cultural resource information contained in the draft Supplemental Environmental Impact Statement (SEIS) for the proposed Nichols Ranch ISR Project.<sup>1</sup> NRC staff requests your comments and recommendations on mitigation and the path forward within 30 days of receipt of this letter and associated materials.

## **BACKGROUND**

By letter dated July 1, 2008,<sup>2</sup> NRC staff initiated consultation under Section 106 of the NHPA with the Wyoming State Historic Preservation Office (WY SHPO) concerning the proposed Nichols Ranch ISR project by Uranerz Energy Corporation (Uranerz) in Campbell and Johnson Counties, Wyoming.

The Area of Potential Effect (APE) for the proposed undertaking has been completely inventoried. The applicant, Uranerz, submitted two Class III reports for newly inventoried areas

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<sup>1</sup> The draft SEIS is publicly available in the NRC Public Document Room (PDR) located at One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, or from the NRC's Agencywide Documents Access and Management System (ADAMS). The ADAMS Public Electronic Reading Room is accessible at <http://www.nrc.gov/reading-rm/adams.html>. The accession number for the DSEIS is ML093340536.

<sup>2</sup> NRC. 2008. Letter to M. Hopkins, State Historic Preservation Officer from G. Suber, Branch Chief, Office of Federal and State Materials and Environmental Management Programs. Subject: Initiation of Section 106 Process for Uranerz Energy Corporation's Nichols Ranch Uranium Recovery Project License Request (Docket No. 040-09067). July 1, 2008. ADAMS No. ML081760693.

and one Class I report for previously inventoried areas with its application for an NRC license. The reports, which were forwarded to you by letter dated August 26, 2009,<sup>3</sup> are listed below:

- *Class III Cultural Resource Inventory of the Uranerz Energy Corporation, Hank In-Situ Uranium Project.* Prepared by Frontier Archaeology. November 2007.
- *Class III Cultural Resource Inventory for Uranerz Energy Corporation's 80-acre Parcel in the Hank Unit, Campbell County, Wyoming.* Prepared by TRC Environmental Corporation. October 2008.
- *Class I Literature Review of Uranerz Energy Corporation's Nichols Ranch ISR Project, Campbell and Johnson Counties Wyoming.* Prepared by TRC Environmental Corporation. March 2010.

In addition to these reports, an additional survey was completed for an unrelated coal bed natural gas plan of development project whose inventoried areas overlap with the proposed Nichols Ranch ISR Project site:

- *Anadarko Petroleum Corporation Dry Willow Phase 4 POD Class III Cultural Resource Inventory Campbell County, Wyoming.* Prepared by Arcadis U.S., Inc. July 2008.

As mentioned previously, this survey is attached to this letter per your March 3, 2010, request. Because the review for the Anadarko final project is still pending, this survey has not been reviewed by the WY SHPO office to date.

In the survey, Arcadis inventoried a total of 7340 acres, of which approximately 1040 acres are within the central and southern portion of the Hank Unit of the proposed Nichols Ranch ISR Project permit boundary. Uranerz has enclosed an annotated copy of the Arcadis' project map that shows the relevant portions of the proposed Nichols Ranch ISR Project permit boundaries within the larger area inventoried by the Arcadis report. Note that only the relevant site forms for those sites within the Nichols Ranch ISR project APE are enclosed with this report. The Arcadis survey did not identify any new sites beyond those discussed in the draft SEIS for the proposed Nichols Ranch ISR Project. It should also be noted that some areas that were inventoried in the Arcadis report were previously inventoried in Frontier Archaeology's 2006 Hank In-Situ Uranium Prospect and 2007 Hank In-Situ Uranium Project, which were forwarded to you in the August 26, 2009 letter.

## **IDENTIFICATION, ELIGIBILITY, AND EFFECT**

The NRC has determined that the identification efforts detailed in the four reports meet the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716).<sup>4</sup> The draft SEIS for the proposed Nichols Ranch ISR Project assesses the impacts to historic and cultural resources within or near the APE for the undertaking and

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<sup>3</sup> NRC. 2009. Letter to R. Currit, State Historic Preservation Officer from A. Kock, Branch Chief, Office of Federal and State Materials and Environmental Management Programs. Subject: Uranerz Energy Corporation, Nichols Ranch In-Situ Uranium Recovery Project – Section 106 Consultation – State Historic Preservation Office File #0708RLC009. August 26, 2009. ADAMS No. ML092320627.

includes the eligibility, effect, and treatment determinations made by the NRC. The following table summarizes the cultural resources within or near the APE and each site's eligibility. Updates to Tables 3-10 and 3-11 in the draft SEIS appear in **bold**. Note that the column entitled, "Report No.: SHPO Accession No." is included for your convenience and does not appear in the SEIS. Site 48CA268 is bolded in the following table because it was not included in Table 3-11 of the draft SEIS in error, though the site was discussed in detail in the text of the draft SEIS. Additionally, information regarding the *National Register of Historic Places* (NRHP) eligibility status of three sites has changed and are underlined in the table.

### Nichols Ranch ISR Project Archaeological Sites

Site ID	Site Type	NRHP Finding	Comments/ Stipulations	Report No.: SHPO Accession No.
<b>Nichols Ranch Unit Archaeological Sites</b>				
48JO2944	Prehistoric: lithic scatter Historic: debris scatter	Not eligible	<b>No further work</b>	IV: 8-425
48JO2946	Prehistoric: open camp	Not eligible	<b>No further work</b>	IV: 8-425
48JO2948	Prehistoric: lithic scatter	Not eligible	<b>No further work</b>	IV: 8-425
48JO2949	Historic: debris scatter	Not eligible	<b>No further work</b>	IV: 8-425
48JO2950	Historic: debris scatter	Not eligible	<b>No further work</b>	IV: 8-425
48JO2953	Prehistoric: lithic scatter Historic: building remains (razed Nichols Ranch)	Not eligible	<b>No further work</b>	IV: 8-425
48JO2957	Prehistoric: lithic scatter	Not eligible	<b>No further work</b>	IV: 8-425
48CA5386	Prehistoric: lithic scatter Historic: hunting blinds and wind breaks	Not eligible	<b>No further work</b>	IV: 8-425
48CA5390	Prehistoric: lithic scatter Historic: debris scatter	Not eligible	<b>No further work</b>	IV: 8-425
48CA5391	Prehistoric: lithic scatter with feature Historic: debris scatter	Eligible	<b>Limit construction; protective fencing<sup>5</sup></b>	IV: 8-425
48CA5392	Prehistoric: lithic scatter	Not eligible	<b>No further work</b>	IV: 8-425
48CA5393	Prehistoric: lithic scatter	Not eligible	<b>No further work</b>	IV: 8-425

<sup>4</sup> 48 FR 44716, National Park Service. "The Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation." *Federal Register*. Volume 48, pp. 44716. Washington, D.C. September 29, 1983.

<sup>5</sup> Uranerz has committed to protecting these sites in their application for an NRC license. Specific mitigation measures to which they have committed are further discussed in the section of this letter entitled "Stipulations."

Site ID	Site Type	NRHP Finding	Comments/ Stipulations	Report No.: SHPO Accession No.
48CA5406	Prehistoric: lithic scatter	Not eligible	No further work	IV: 8-425
<b>Hank Unit Archaeological Sites</b>				
<b>48CA268</b>	<b>Prehistoric/Historic: Traditional Cultural Property</b>	<b>Eligible</b>	<b>Mitigation of potential adverse effect to setting through MOA<sup>6</sup></b>	IV: 5-1851
48CA379	Prehistoric: lithic scatter	Not eligible	No further work	IV: 6-1350
48CA6146/ 48CA6147	Prehistoric: lithic, groundstone, and FCR scatter with stone circles.  Historic: debris scatter	<b>Not eligible</b>	No further work	I
48CA6148	Prehistoric: lithic scatter with stone circles	<b>Not eligible</b>	No further work	I
48CA6149	Prehistoric: lithic scatter	Not eligible	No further work	IV: 6-1350
48CA6151	Prehistoric: lithic scatter	Not eligible	No further work	IV: 6-1350
48CA6342	Prehistoric: lithic scatter with hearth	Not eligible	No further work	IV: 6-1350
48CA6343	Prehistoric: lithic scatter with features	Not eligible	No further work	IV: 6-1350
48CA6344	Prehistoric: lithic scatter with FCR	Not eligible	No further work	IV: 6-1350
48CA6345	Prehistoric: lithic scatter with FCR	Not eligible	No further work	IV: 6-1350
48CA6475	Prehistoric: open camp	Eligible	<b>Limit construction; protective fencing</b>	II
48CA6490	Prehistoric: open camp	Eligible	<b>Limit construction; protective fencing</b>	II
48CA6491	Prehistoric: lithic scatter	Not eligible	No further work	II
48CA6498	Prehistoric: lithic scatter	Not eligible	No further work	II
48CA6499	Prehistoric: lithic scatter	Not eligible	No further work	II
48CA6748	Prehistoric: lithic scatter with FCR and activity areas	Eligible	<b>Limit construction; protective fencing</b>	I
48CA6749	Prehistoric: lithic scatter	Not eligible	No further work	I
48CA6750	Prehistoric: lithic scatter with groundstone	Not eligible	No further work	I
48CA6751	Prehistoric: lithic scatter with activity areas and possible stone	Eligible	<b>Limit construction; protective fencing</b>	I

<sup>6</sup> The NRC is currently drafting an MOA for signature between the WY SHPO, the BLM, the NRC, Uranerz, and interested Indian Tribes to mitigate potential adverse effects to Site 48CA268 (the Pumpkin Buttes Traditional Cultural Property).

Site ID	Site Type	NRHP Finding	Comments/ Stipulations	Report No.: SHPO Accession No.
	circle feature			
48CA6752	Prehistoric: lithic and FCR scatter	Not eligible	<b>No further work</b>	I
48CA6753	Prehistoric: lithic and FCR scatter	Eligible	<b>Limit construction; protective fencing</b>	I
48CA6754	Prehistoric: lithic and FCR scatter with FCR concentration	<b>Eligible</b>	<b>Limit construction; protective fencing</b>	I
48CA6926	Prehistoric: lithic scatter	Not eligible	<b>No further work</b>	III
48CA6927	Prehistoric: lithic scatter with features	Eligible	<b>Limit construction; protective fencing</b>	III

On the Nichols Ranch Unit, Sites 48JO2944, 48JO2946, 48JO2948, 48JO2949, 48JO2950, 48JO2953, 48JO2957, 48CA5386, 48CA5390, 48CA5392, 48CA5393, and 48CA5406, and on the Hank Unit, Sites 48CA379, 48CA6146/48CA6147, 48CA6148, 48CA6149, 48CA6151, 48CA6342, 48CA6343, 48CA6344, 48CA6345, 48CA6491, 48CA6498, 48CA6499, 48CA6749, 48CA6750, 48CA6752, and 48CA6926, are all not eligible for the NRHP. The proposed project will have **no effect** upon these resources. No further work is necessary.

On the Hank Unit, Sites 48CA6475, 48CA6490, 48CA6748, 48CA6751, 48CA6753, and 48CA6754, are eligible for the NRHP. These sites are all located outside areas that the proposed Nichols Ranch ISR Project would disturb. These sites would be avoided by the project, and thus, the proposed project will have **no effect** upon these resources. No further work is necessary. However in their application, Uranerz has committed to avoiding these sites and providing protective fencing in the event that any disturbance occurs near these sites.

On the Nichols Ranch Unit, Site 48CA5391, and on the Hank Unit, Sites 48CA6754 and 48CA6927, are all eligible for the NRHP and are located within the proposed Nichols Ranch ISR Project's projected wellfield. Uranerz has agreed to avoid these three sites as well as provide protective fencing to avoid inadvertent disturbance. The proposed project will have **no effect** upon these resources with adherence to the stipulations.

On the Hank Unit, Site 48CA268 (Pumpkin Buttes Traditional Cultural Property [TCP]) is eligible for listing on the NRHP. The TCP is located outside any proposed physical disturbance areas and will be completely avoided by the project. The proposed project will have **no effect** on the physical remains of the Pumpkin Buttes TCP. However, the undertaking would have a **potential adverse affect** to the viewshed of the Pumpkin Buttes TCP.

The NRC is consulting on the finding of adverse effect on Site 48CA268 (Pumpkin Buttes TCP). Pending your concurrence, the mitigation of adverse effects to the Pumpkin Buttes TCP will be addressed in a Memorandum of Agreement (MOA) between the WY SHPO, the BLM, the NRC, Uranerz, and interested Indian Tribes. The NRC has contacted interested Indian Tribes in a letter dated April 23, 2010,<sup>7</sup> to request information regarding historic, cultural, and

<sup>7</sup> NRC. 2010. Letter to Tribes from K. Hsueh, Branch Chief, Office of Federal and State Materials and Environmental Management Programs. Subject: Request for Information Regarding Historic, Cultural, and Archaeological Resources Potentially Affected by the Proposed Nichols Ranch ISR Project in

archaeological resources potentially affected by the proposed undertaking and to invite the tribes to become signatories to the MOA that will likely be developed to mitigate impacts to the Pumpkin Buttes TCP. To date, seven tribes are potentially interested in becoming signatories to an MOA. These tribes are: Eastern Shoshone Tribe, Northern Arapaho Tribe, Northern Cheyenne Tribe, Blackfeet Tribe, Ft. Peck Assiniboine/Sioux Tribe, Oglala Sioux, and Cheyenne River Sioux Tribe.

## STIPULATIONS

Uranerz has committed to the following stipulations in their reply to open issues for the safety review<sup>8</sup> in February 2010, which included revisions to Section 2.4 of the Technical Report for the NRC license application. Because the revision to the Uranerz Technical Report was submitted to the NRC after the publication of the draft SEIS, these stipulations are not contained in the draft SEIS. However, they will be incorporated into the final SEIS cultural resources impacts section.

- Uranerz will not conduct any ground-disturbing work in areas that have not been previously inventoried and cleared for cultural resources.
- Uranerz will protect all cultural properties that have been determined eligible for listing on the NRHP within the permit area from ground-disturbing activities. To protect those eligible sites that are located within or near the projected well field (specifically sites 48CA6754, 48CA6927, and 48CA5391), Uranerz will delineate these sites and will mark them with green colored plastic snow fence material. The fencing material will not be highly visible and no signs will be installed but the fencing material will protect these sites from inadvertent disturbance. Uranerz will also provide small openings (6-8 ft) in the fencing to allow livestock and wildlife to move freely in, out, and through the site.
- If Uranerz determines that it must conduct ground disturbing activities within the boundaries of an eligible site, Uranerz will notify NRC, SHPO, and WDEQ-LQD and Uranerz will prepare an appropriate cultural resource mitigation plan and submit said plan to the NRC and SHPO for review and approval. Once approved the mitigation plan will be implemented before any ground disturbing activities are undertaken.
- If cultural resources are discovered during operations, Uranerz will immediately stop ground-disturbing activities in the area of the discovery and will immediately notify the WDEQ-LQD, NRC, and the SHPO. Within two (2) working days of notification, the WDEQ-LQD, the NRC, and the SHPO will evaluate or have evaluated any discovered cultural resources and will determine if any action may be required to protect or preserve such discoveries.

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Campbell and Johnson Counties, Wyoming (Docket No. 040-09067) and Invitation to Become a Signatory to Associated Memorandum of Understanding. April 23, 2010. ADAMS No. ML100880084.

<sup>8</sup> Uranerz. 2010. Letter to R. Linton, Project Manager, U.S. Nuclear Regulatory Commission from M. Thomas, Environmental, Safety, and Health Manager, Uranerz Energy Corporation. Subject: Reply to Responses for Open Issues to the Safety Evaluation Report for the Nichols Ranch ISR Project License Application. February 24, 2010. ADAMS No. ML100740143.

- All cultural resources will remain under the jurisdiction of the private landowner (for the 3091 acres of privately owned land on the Nichols Ranch and Hank Units) or the United States government (for the 280 acres of BLM-owned land on the Hank Unit) depending on the where the cultural resource(s) were discovered.
- Uranerz will instruct all employees, contractors, subcontractors and any additional parties involved in the project that they are not to search for archaeological materials (i.e., arrow head hunting).
- If Native American human remains, funerary objects, or objects of cultural patrimony are encountered on BLM land, Uranerz will stop all work in the immediate area and will immediately notify NRC and WDEQ-LQD, and the NRC will comply with Section 3 of the Native American Graves Protection and Repatriation Act and its implementing regulations at 43 CFR Part 10. If Native American human remains, funerary objects, or objects of cultural patrimony are encountered as a result of a NRC undertaking on private surface, the remains will be evaluated as a historic property and procedures. Existing State and local laws will be followed pertaining to discovery of Native American human remains, funerary objects, or objects of cultural patrimony on private surface.

Additionally, Uranerz has committed to following the cultural resource mitigation measures stipulated in the Programmatic Agreement between the BLM and the Wyoming SHPO<sup>9</sup> for the Pumpkin Buttes TCP detailed below. These commitments are also contained in the February 2010 revision to Section 2.4 of the Technical Report for the NRC license application.

- Uranerz will instruct all employees, contractors, subcontractors and any additional parties involved in the project to avoid the Pumpkin Buttes TCP.
- No ground disturbing activities will occur on the tops and sides of Pumpkin Buttes. The tops and bases of the buttes are defined as follows, based on 1:24,000 USGS topographic quadrangles for the area:
  1. North Middle Butte: Top = 6,000-ft contour line; Base = 5,500-ft contour line
  2. South Middle Butte: Top = 5,920-ft contour line; Base = 5,500-ft contour line
- For all activities associated with any future project modification, Uranerz will obtain authorization from the NRC and SHPO before conducting ground disturbing activities. Uranerz, and the NRC will implement measures to reduce the visual contrast for any changes to the project.
- Prior to the NRC and WDEQ-LQD authorization of additional construction activities, Uranerz will:
  1. Perform a Class III cultural resource inventory, biological, and/or other inventories as required;

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<sup>9</sup> BLM. 2009. *Programmatic Agreement Between Bureau of Land Management and Wyoming State Historic Preservation Officer Regarding Mitigation of Adverse Effects on the Pumpkin Buttes TCP from Anticipated Federal Minerals Development*. ADAMS No. ML092640122.

2. Submit detailed construction plans; and
  3. Participate in an on-site evaluation (if necessary).
- The gravel surface of resource roads of new roads will be a color that does not create a visual contrast to the surrounding topography.
  - All gathering pipelines will be coridored next to or within roads, wherever possible. Existing disturbance areas will be used for pipeline corridors where practicable.
  - Wherever practicable, areas of existing disturbance will be used. To minimize visual contrast, well locations will not be placed in areas of dense sagebrush or other vegetation unless absolutely necessary. Brush hogging or other vegetation removal on drilling locations within areas of dense sagebrush or other vegetation will be feathered to reduce visual contrast and limited to 30 feet in diameter. All above ground infrastructure related to well production will be painted in a color that best blends in with the surrounding topography. These colors are typically Covert Green (PANTONE for Architecture Color Guide 18-0617 TPX) or Carlsbad Canyon (Munsell Soil Color 2.5Y 6/2). It may be determined that different colors are required on a site specific determination based on visual assessment.
  - Wherever practicable, power lines servicing wells will be buried and buried power lines will be placed inside, or within five feet of the trench utilized for pipelines. Construction of over head power lines within two miles from the base elevation of the Pumpkin Buttes will be designed to reduce visual contrast.
  - All permanent above-ground structures (e.g., production equipment, tanks, etc.) not subject to safety requirements will be painted to blend with the natural color of the landscape. The color will simulate the standard environmental colors established by the BLM for visual resource management. These colors are typically Covert Green (PANTONE for Architecture Color Guide 18-0617 TPX) or Carlsbad Canyon (Munsell Soil Color 2.5Y 6/2). It may be determined that different colors are required on a site specific determination based on visual assessment.

As mentioned in the introduction to this letter, NRC staff requests your comments and recommendations on mitigation and the path forward within 30 days of receipt of this letter and associated materials. The NRC will also be forwarding you a copy of the draft MOA for mitigation of potential adverse impacts to the viewshed of the Pumpkin Buttes TCP once a preliminary draft is available for distribution. If you have any questions or require additional information, please contact the Environmental Project Manager, Ms. Irene Yu at (301) 415-1951, or at [irene.yu@nrc.gov](mailto:irene.yu@nrc.gov).

Sincerely,

**/RA/**

Kevin Hsueh, Chief  
Environmental Review Branch B  
Environmental Protection  
and Performance Assessment Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

Docket No.: 40-9067

Enclosures:

1. Arcadis U.S. Inc., Anadarko  
Petroleum Corporation Dry Willow  
Phase 4 POD Class III Cultural  
Resource Inventory
2. Map 1
3. Map 2
4. Letter from NRC to SHPO,  
July 1, 2008 (ML081760693)
5. Letter from NRC to SHPO,  
August 26, 2009 (ML092320627)

cc w/o enclosures:

D. McKenzie, DEQ, Cheyenne  
G. Mooney, DEQ, Sheridan  
C. Crago, BLM, Buffalo  
P. Beels, BLM, Buffalo  
M. Thomas, Uranerz

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- P. Beels, BLM, Buffalo
- M. Thomas, Uranerz

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