

**NUCLEAR REGULATORY COMMISSION**

**[NRC-2008-0339]**

**Docket No. 40-9067**

**Uranerz Energy Corporation; Nichols Ranch In-Situ Recovery Project**

**New Source Material License Application**

**Notice of Intent to Prepare a Supplemental Environmental Impact Statement**

**AGENCY:** The U.S. Nuclear Regulatory Commission

**ACTION:** Notice of Intent (NOI)

**SUMMARY:** Uranerz Energy Corporation (Uranerz) submitted an application for a new source material license for the Nichols Ranch *In-Situ* Recovery (ISR) Project to be located in Campbell and Johnson Counties, Wyoming, approximately 46 miles south-southwest of Gillette, Wyoming and approximately 61 miles north-northeast of Casper, Wyoming. The application proposes the construction, operation, and decommissioning of ISR, also known as *in-situ* leach, facilities and restoration of the aquifer from which the uranium is being extracted. Uranerz submitted the application for the new source material license to the U.S. Nuclear Regulatory Commission (NRC) by a letter dated November 30, 2007. A notice of receipt and availability of the license application, including the Environmental Report (ER), and opportunity to request a hearing was published in the *Federal Register* on June 16, 2008 (73 FR 34052). The purpose of this notice of intent is to inform the public that the NRC will be preparing a site-specific Supplemental Environmental Impact Statement (SEIS) to the Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities (ISR GEIS) for a new source material license for the Nichols Ranch ISR Project, as required by 10 CFR 51.26 (d). In addition, as outlined

in 36 CFR 800.8, "Coordination with the National Environmental Policy Act," the NRC plans to use the environmental review process as reflected in 10 CFR Part 51 to coordinate compliance with Section 106 of the National Historic Preservation Act.

**FOR FURTHER INFORMATION CONTACT:** For general information on the NRC NEPA or the environmental review process related to the Nichols Ranch ISR Project application, please contact the NRC Environmental Project Manager, Irene Yu, at (301) 415-1951 or [irene.yu@nrc.gov](mailto:irene.yu@nrc.gov).

Information and documents associated with the Nichols Ranch ISR Project, including the license application, are available for public review through our electronic reading room:

<http://www.nrc.gov/reading-rm/adams.html> and on the NRC's Nichols Ranch Site Web page:

[http://www.nrc.gov/info-finder/materials/uranium/apps-in-review/nichols-ranch-new-app-](http://www.nrc.gov/info-finder/materials/uranium/apps-in-review/nichols-ranch-new-app-review.html)

[review.html](http://www.nrc.gov/info-finder/materials/uranium/apps-in-review/nichols-ranch-new-app-review.html). Documents may also be obtained from NRC's Public Document Room at the U.S. Nuclear Regulatory Commission Headquarters, 11555 Rockville Pike (first floor), Rockville, Maryland.

## **SUPPLEMENTARY INFORMATION:**

### **1.0 Background**

Uranerz submitted the application for the new source material license to the NRC for ISR facilities by a letter dated November 30, 2007. A notice of receipt and availability of the license application, including the ER, and opportunity to request a hearing was published in the *Federal Register* on June 16, 2008 (73 FR 34052). No requests for hearing were submitted.

Based on the anticipated efficiencies gained through the development of the ISR GEIS, the NRC originally planned to document this environmental evaluation in draft and final Environmental Assessments (EAs). However, during the development of the final ISR GEIS,

NRC decided to prepare a SEIS that will tier off of the ISR GEIS for applications to license new ISR facilities. This environmental evaluation for the Nichols Ranch ISR Project will now be documented in draft and final SEISs instead of an EA. While NRC regulations do not require scoping under 10 CFR Part 51 for SEISs, NRC staff met with Federal (Bureau of Land Management – Cheyenne, Casper, Buffalo; Bureau of Indian Affairs – Fort Washakie; Fish & Wildlife Service - Buffalo), State (Wyoming Department of Environmental Quality – Cheyenne, Sheridan; State Engineer’s Office; Governor’s Planning Office; State Historic Preservation Office) and local government agencies (Converse County Planning Department; Johnson County Commissioners’ Office; City of Casper Planning Office; Town of Wright) and public organizations (Buffalo Chamber of Commerce; Campbell County Economic Development Corporation; Wyoming Community Development Authority; Converse Area New Development Organization) in January of 2009 as part of a site visit to gather site-specific information to assist in the preparation of the Nichols Ranch ISR Project environmental review. NRC also contacted potentially interested tribes and local public interest groups via e-mail and telephone to gather additional information.

The NRC has begun evaluating the potential environmental impacts associated with the proposed ISR facility in parallel with the review of the license application. This environmental evaluation will be documented in draft and final SEISs in accordance with NRC’s NEPA implementing regulations contained in 10 CFR Part 51. The NRC is required by 10 CFR 51.20 (b)(8) to prepare an Environmental Impact Statement (EIS) or a supplement to an EIS for the issuance of a license to possess and use source material for uranium milling. The ISR GEIS and the site-specific SEIS fulfills this regulatory requirement. The purpose of the present notice is to inform the public that the NRC staff will prepare a site-specific supplement to the ISR GEIS (NUREG-1910) as part of the review of the application.

## **2.0 Nichols Ranch ISR Facilities**

The facilities, if licensed, would include a central processing plant, satellite facility, accompanying wellfields, and ion exchange columns. The process involves the dissolution of the water-soluble uranium from the mineralized host sandstone rock by pumping oxidants (oxygen or hydrogen peroxide) and chemical compounds (sodium bicarbonate) through a series of production and extraction wells. The uranium-rich solution is transferred from the production wells to either the central processing plant or satellite facility for uranium concentration using ion exchange columns. Final processing is conducted in the central processing plant process to produce yellowcake for use in manufacturing commercial nuclear fuel for use in power reactors.

## **3.0 Alternatives to be Evaluated**

*No-Action*—The no-action alternative would be not to issue the license. Under this alternative, the NRC would not approve the license application for the proposed ISR facilities. This serves as a baseline for comparison.

*Proposed action*—The proposed federal action is to issue a license to use or process source material at the proposed ISR facilities. The license review process analyzes the construction, operation, and decommissioning of ISR facilities and restoration of the aquifer from which the uranium is being extracted. The ISR facilities would be located in Campbell and Johnson Counties, Wyoming, approximately 46 miles south-southwest of Gillette, Wyoming and approximately 61 miles north-northeast of Casper, Wyoming. The applicant would be issued an NRC license under the provisions of 10 CFR Parts 40.

Other alternatives not listed here may be identified through the environmental review process.

#### 4.0 Environmental Impact Areas to be Analyzed

The following areas have been tentatively identified for analysis in the SEIS:

- *Land Use:* Plans, policies, and controls;
- *Transportation:* Transportation modes, routes, quantities, and risk estimates;
- *Geology and Soils:* Physical geography, topography, geology, and soil characteristics;
- *Water Resources:* Surface and groundwater hydrology, water use and quality, and the potential for degradation;
- *Ecology:* Wetlands, aquatic, terrestrial, economically and recreationally important species, and threatened and endangered species;
- *Air Quality:* Meteorological conditions, ambient background, pollutant sources, and the potential for degradation;
- *Noise:* Ambient, sources, and sensitive receptors;
- *Historical and Cultural Resources:* Historical, archaeological, and traditional cultural resources;
- *Visual and Scenic Resources:* Landscape characteristics, manmade features and viewshed;
- *Socioeconomics:* Demography, economic base, labor pool, housing, transportation, utilities, public services/facilities, and education;
- *Environmental Justice:* Potential disproportionately high and adverse impacts to minority and low-income populations;
- *Public and Occupational Health:* Potential public and occupational consequences from construction, routine operation, transportation, and credible accident scenarios (including natural events);

- *Waste Management*: Types of wastes expected to be generated, handled, and stored; and
- *Cumulative Effects*: Impacts from past, present, and reasonably foreseeable actions at and near the site(s).

This list is not intended to be all inclusive, nor is it a predetermination of potential environmental impacts.

## **5.0 The NEPA Process**

The SEIS for the Nichols Ranch ISR Project will be prepared pursuant to the NRC's NEPA Regulations at 10 CFR Part 51. The NRC will continue its environmental review of the application and as soon as practicable, the NRC and its contractor will prepare and publish a draft SEIS. NRC currently plans to have a 45-day public comment period for the draft SEIS. Availability of the draft SEIS and the dates of the public comment period will be announced in the *Federal Register* and the NRC website: [www.nrc.gov](http://www.nrc.gov). The final SEIS will include responses to public comments received on the draft SEIS.

Dated at Rockville, Maryland, this 28th day of July, 2009.

FOR THE NUCLEAR REGULATORY COMMISSION

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