

**NUCLEAR REGULATORY COMMISSION**

**[NRC-2009-0145**

**Docket No. 40-9079**

**Uranium One Americas; Antelope and JAB Uranium Project**

**New Source Material License Application**

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

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

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

**SUMMARY:** Uranium One Americas (Uranium One) submitted an application for a new source material license for the Antelope and JAB Uranium Project to be located in Sweetwater County, Wyoming, approximately 38 miles northwest of Rawlins, Wyoming and approximately 90 miles southwest of Casper, Wyoming. The application proposes the construction, operation, and decommissioning of *in-situ* recovery (ISR), also known as *in-situ* leach, facilities and restoration of the aquifer from which the uranium is being extracted. Uranium One submitted the application for the new source material license to the U.S. Nuclear Regulatory Commission (NRC) by a letter dated July 3, 2008. 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 May 19, 2009 (74 FR 23436). The purpose of this NOI 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 Antelope and JAB Uranium 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 (NEPA)," 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 process or the environmental review process related to the Antelope and JAB Uranium Project application, please contact the NRC Environmental Project Manager, Johari Moore, at (301) 415-7694 or [johari.moore@nrc.gov](mailto:johari.moore@nrc.gov).

Information and documents associated with the Antelope and Jab Uranium 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 Antelope and JAB Uranium Project web page: <http://www.nrc.gov/info-finder/materials/uranium/apps-in-review/jab-antelope-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**

Uranium One submitted the application for a new source material license to the NRC for ISR facilities by a letter dated July 3, 2008. 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 May 19, 2009 (74 FR 23436). No requests for hearing were received.

The NRC is preparing a SEIS that will tier off of the ISR GEIS (NUREG-1910). The NRC staff is planning to place ads in newspapers serving communities near the proposed site requesting information and comments from the public regarding the proposed action. Also, NRC staff plans to meet with and gather information from local agencies and public interest

groups in conjunction with a visit to the proposed site. However, no public scoping meetings will be held as part of this review. NRC staff may also use relevant information gathered for the GEIS to define the scope of the SEIS. The NRC staff is consulting with Bureau of Land Management, U.S. Fish & Wildlife Service, U.S. Army Corps of Engineers, Wyoming Department of Environmental Quality, Wyoming State Historic Preservation Office, Shoshone and Arapaho Tribal Historic Preservation Offices, Wyoming Game and Fish Department, and Natural Resource Conservation District in preparing the SEIS.

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 NEPA and NRC's 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 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 fulfill 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 as part of the review of the application.

## **2.0 Antelope and JAB 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 injection wells. The uranium-rich solution is transferred from 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 to produce yellowcake,

which would be sold to off-site facilities for further processing and eventual use as commercial fuel for use in nuclear power reactors.

### **3.0 Alternatives to be Evaluated**

*No-Action*—The no-action alternative would be to deny the license application. Under this alternative, the NRC would not issue the license. 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 Sweetwater County, Wyoming, approximately 38 miles northwest of Rawlins, Wyoming and approximately 90 miles southwest 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 Antelope and JAB Uranium 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. The 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 6<sup>th</sup> day of August 2009.

FOR THE NUCLEAR REGULATORY COMMISSION

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