

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
WASHINGTON, D.C. 20555-0001

June 7, 2004

**NRC REGULATORY ISSUE SUMMARY 2004-09  
STATUS ON DEFERRAL OF ACTIVE REGULATION OF  
GROUND-WATER PROTECTION AT *IN SITU* LEACH  
URANIUM EXTRACTION FACILITIES**

**ADDRESSEES**

All holders of materials licenses for uranium and thorium recovery facilities.

**INTENT**

The U.S. Nuclear Regulatory Commission (NRC) is issuing this regulatory issue summary (RIS) to inform addressees and other interested parties of (1) the NRC's plans for the deferral of active regulation of ground-water protection at *in situ* leach (ISL) uranium extraction facilities; and (2) the comments received in response to RIS 2004-02 on this topic. This RIS supersedes RIS 2004-02 in its entirety. No specific action or written response is required.

**BACKGROUND**

Over the past several years, the uranium recovery industry has expressed concern that the NRC regulation of ground-water at ISLs duplicates the ground-water protection programs required by the Safe Drinking Water Act (SDWA), as administered by the U.S. Environmental Protection Agency (EPA) or EPA-authorized States. EPA and the States protect ground-water quality through the Underground Injection Control (UIC) program, under the SDWA. Some EPA-authorized States require additional measures in their UIC programs that are more stringent than the Federal program.

Historically, the NRC has imposed conditions on ISL operations to ensure that ground-water quality is maintained during licensed activities and that actions are taken to ensure the restoration of ground-water quality before the license is terminated. The specific conditions imposed in ISL licenses have typically been the result of NRC's independent review of site-specific conditions at the ISLs, as documented in safety evaluation reports and appropriate environmental evaluations.

In addition to the NRC's review, licensees must also obtain a UIC permit from EPA or the EPA-authorized State, before uranium recovery operations can begin. The EPA or the authorized State conducts many of the same types of reviews as the NRC. This is illustrated by the NRC

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incorporating ground-water protection limits from a State's permitting program into specific license requirements, after conducting its own review of the licensee's ground-water protection program, including the use of State-imposed standards. The staff routinely accepts specific methodologies and guidance developed by the EPA or States for ground-water monitoring programs and well construction. RIS 2000-23, "Recent Changes to Uranium Recovery Policy," dated November 30, 2000 (ML003773008) provides additional background information on this topic.

Since the publication of RIS 2000-23, the NRC staff has held additional discussions with EPA; the States of Nebraska, New Mexico, and Wyoming; and the industry. As a result of these discussions, the staff prepared SECY-03-0186, "Options and Recommendations for NRC Deferring Active Regulation of Ground-Water Protection at *In Situ* Leach Uranium Extraction Facilities," dated October 29, 2003 (ML031210874). In this SECY, the staff recommended that the NRC defer such active regulation to EPA-authorized non-Agreement States through the development of a Memorandum of Understanding (MOU or agreement) with individually affected States. In a Staff Requirements Memorandum dated November 19, 2003, (ML033230208) the Commission approved the staff's recommendation and directed the staff to develop a RIS to obtain public comment about this proposal before proceeding with the development of an MOU with each appropriate State.

On February 23, 2004, NRC issued RIS 2004-02 (ML040550197) to request that, on a voluntary basis, addressees and other interested parties submit information pertaining to the proposed deferral of active regulation of ground-water protection at ISL uranium extraction facilities. A notice of availability was published in the Federal Register on March 12, 2004 (69 FR 11899). The comment period closed on April 11, 2004.

## **SUMMARY OF ISSUE**

The NRC plans to enter into an MOU, with each State, to defer active regulation of both licensing and inspection activities for ground-water protection. This process began with an initial official contact with the appropriate program director in each State, by the Director of the Office of Nuclear Material Safety and Safeguards, requesting agreement to begin the MOU process (ML033570409 and ML033570472). As part of the agreement process, the NRC staff will work with each State to compare its ground-water protection program with that of NRC's. This comparison will examine the general review areas and staffing of each State, similar to the Integrated Material Performance Evaluation Program review performed for Agreement States.

The NRC staff will use NUREG-1569, "Standard Review Plan for *In Situ* Leach Uranium Extraction License Applications," as the basis for performing the programmatic comparison with each State. Areas identified as essentially equivalent to the NRC program will be included in the MOU as programmatic areas where NRC will defer active regulatory oversight to the State. Any areas determined not essentially equivalent to the NRC program will be identified in the MOU as areas where the NRC will continue its direct regulatory oversight. Only the production

well-field ground-water protection aspects of the NRC's licensing and inspection programs will be deferred to the State. The NRC will enter into an MOU with the State, if the NRC concludes that the State's ground-water protection program is equivalent to the NRC's program, providing adequate protection of public health and safety, and the environment.

The following table provides information concerning the currently operating ISLs in non-Agreement States.

Currently Licensed and Operating ISLs  
in Non-Agreement States

Licensee	State	License No.	Docket No.
Crow Butte Resources	Nebraska	SUA-1543	040-008943
Cogema	Wyoming	SUA-1341	040-008502
Power Resources, Inc.	Wyoming	SUA-1548	040-008964

Based on the NRC staff's experience in working with Nebraska and Wyoming, it expects that the comparison will result in finding that these States' ground-water protection programs are equivalent to NRC's.

On successfully completing an MOU with a State, the NRC will then amend each of the affected ISL licenses at the request of each licensee. The amendment will remove, as appropriate, the specific conditions pertaining to ground-water protection. Each amendment will be subject to an environmental review and a notice of opportunity for a hearing, in accordance with current NRC policy and practices. Thereafter, the NRC will periodically document its review of UIC permits and State inspection reports, as well as State-identified program changes, to determine that the State continues to conduct an acceptable program in accordance with the MOU. The NRC will continue to conduct licensing reviews and inspections for public and worker radiation safety at the affected ISL facilities.

Although implementation of this approach will initially require the expenditure of additional NRC staff resources to achieve the agreements before any resource savings will be realized, the approach offers several advantages. The current dual regulatory burden of the NRC and State reviews of the licensees will be eliminated once the agreement is finalized. Public health, safety, and environmental protection, with regard to ground-water, will be assured at licensed ISL facilities through the State's direct oversight. At the same time, the NRC will retain its authority to regulate ground-water protection at ISLs and can re-enter active regulation in this area if a State's program became inadequate. The effectiveness and efficiency of the NRC's ISL licensing program will be enhanced by making its active role clear to the licensee and other

stakeholders. In time, it is anticipated that the initial outlay of resources to develop the MOUs will be more than offset by the gains from reductions of reviews.

### **Summary of Comments on RIS 2004-02:**

Comments on the proposal described in RIS 2004-02 were received from the States of New Mexico, Texas, and Wyoming; the Wyoming Mining Association; the National Mining Association (NMA); the Nuclear Energy Institute (NEI); Crow Butte Resources, Inc.; and Power Resources, Inc. All comments were favorable and supported NRC's proposal to defer active regulation in this area using the MOU process discussed in RIS 2004-02.

NEI commented that the NRC should relinquish regulation of all *in-situ* well-field operations. NEI stated that such operations are equivalent to the mining of ores in conventional open pit or underground operations that are not subject to NRC licensing. In response, NRC staff pointed out that ISL operations involve the in-place (i.e., *in-situ*) processing of ores to extract (i.e., recover) the uranium; therefore, unlike conventional open pit or underground mining in which the ore is removed from the earth and the uranium is later extracted from the ore in a mill, the extraction of the uranium for ISL processes occurs directly in the ore deposit. The NRC has jurisdiction and licensing authority over the milling of uranium (as defined in 10 CFR 40.4). Therefore, we have concluded that for the NRC to relinquish its regulatory authority over the extraction portion of ISL operations, either a State must enter into an agreement with the NRC which provides for the discontinuance of the NRC's regulatory authority over the activities associated with uranium and thorium recovery facilities pursuant to section 247b. of the Atomic Energy Act of 1954, as amended (AEA), or a statutory change would be necessary. We are not convinced at this time that a statutory change would be a cost effective undertaking.

NMA commented that the process described in RIS 2004-02 could be rather lengthy. NMA encouraged the NRC to use the appropriate personnel and needed resources to move forward with the process as expeditiously as possible. In response, NRC will apply the available resources that are needed, consistent with its budget and other priority work.

The State of Wyoming commented on the contents of the example MOU that was included as an attachment to RIS 2004-02. The State of New Mexico commented that a detailed review of the example MOU would be needed before entering into an agreement. Each MOU will be unique because of circumstances unique to each State. Because of these circumstances, discussions with each State will be necessary to develop final MOUs; therefore, an example MOU is not included with this RIS. Similarly, the States' comments on the example MOU have not been included.

This RIS requires no specific action nor written response. If you have any questions about this summary, please contact the technical contact listed below.

***/RA/***

Robert C. Pierson, Director  
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Office of Nuclear Material Safety  
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Attachment: List of Recently Issued NRC Regulatory Issue Summaries

June 7, 2004

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\*see previous concurrence

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OFC	FCFB	TechEd	FCFB	OGC	STP	FCFB	FCSS
<b>NAME</b>	D.Diaz*	E Kraus*	R.Nelson*	M.Schwartz via email	P.Lohaus* via email	G.Janosko	R.Pierson
<b>DATE</b>	5/24/04	5/12/04	5/24/04	5/25/04	5/21/04	5/27/04	5/28/04

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LIST OF RECENTLY ISSUED  
NRC REGULATORY ISSUE SUMMARIES

Regulatory Issue Summary No.	Subject	Date of Issuance	Issued to
2004-08	Results of the License Termination Rule Analysis	05/28/2004	All holders of operating licenses for nuclear power reactors, research and test reactors, as well as decommissioning sites.
2004-07	Release of Final Review Standard (RS)-002, "Processing Applications for Early Site Permits"	05/19/2004	All holders of operating licenses for nuclear power reactors, all applicants for early site permits (ESPs), and all prospective vendors of nuclear power plants in the United States.
2004-06	Independent Survey of Power Reactor Licensees	04/16/2004	All holders of operating licenses for nuclear power reactors except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.
2004-05	Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power	04/15/2004	All holders of operating licenses for nuclear power reactors except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.
2004-04	Use of Code Cases N-588, N-640, and N-641 in Developing Pressure-Temperature Operating Limits	04/05/2004	All holders of construction permits or operating licenses for nuclear power reactors except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

**Note:** NRC generic communications may be received in electronic format shortly after they are issued by subscribing to the NRC listserver as follows:

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