

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

February 23, 2004

**NRC REGULATORY ISSUE SUMMARY 2004-02  
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

To request addressees and other interested parties, on a voluntary basis, to submit information pertaining to the deferral of active regulation of ground-water protection at *in situ* leach (ISL) uranium extraction facilities. The submittal of this information is strictly voluntary. No specific action nor written response is required.

BACKGROUND INFORMATION

Over the past several years, the uranium recovery industry has expressed concern that the U.S. Nuclear Regulatory Commission (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. The States often require additional measures, in the UIC program, 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 an ISL license have typically been the result of NRC's independent review, 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 evidenced by NRC 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

**ML040550197**

program, including the use of State-imposed standards - and the staff routinely accepting specific methodologies and guidance developed by EPA or States for ground-water monitoring programs and well construction. Regulatory Information Summary (RIS) 2003-23, "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 Deferring NRC 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 individual 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 developing an MOU with each appropriate State.

#### SUMMARY OF ISSUE

Under this proposal, the NRC would enter into an agreement (MOU), with an individual State, to defer active regulation of both licensing and inspection activities for ground-water protection. This process would begin 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. As part of the agreement process, the staff would work with each State to compare each State's ground-water protection program with that of NRC's. This comparison would examine the general review areas and staffing of each State, similar to the Integrated Material Performance Evaluation Program review performed for Agreement States.

The staff would use NUREG-1569, "Standard Review Plan for *In Situ* Leach Uranium Extraction License Applications," as the basis for performing the programmatic comparison with the State. Areas identified as essentially equivalent to the NRC program would be included in the MOU as programmatic areas where NRC would defer active regulatory oversight to the State. Any areas determined not essentially equivalent to the NRC program would be identified in the MOU as areas where the NRC would continue its direct regulatory oversight. The NRC would enter into an MOU with the State, if the staff concluded that the State's ground-water protection program provides adequate protection of public health and safety, and the environment, equivalent to the NRC program.

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

Currently Licensed 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 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.

Once an agreement is in place, staff would amend the ISL licenses, at the request of each licensee within the State's jurisdiction, to remove, as appropriate, the specific conditions pertaining to ground-water protection. Thereafter, the staff would 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 would continue to conduct licensing reviews and inspections for public and worker radiation safety at the affected ISL facilities. Only the production well field ground-water protection aspects of the NRC's licensing and inspection programs would be deferred to the State.

Attachment 1 to this RIS provides a draft MOU that would be used as a starting point for discussions with any interested State.

The staff is issuing this RIS as a means of obtaining stakeholder and public input on the proposed approach to defer regulation to the States and on the elements of an acceptable MOU. Absent any comments that would cause the staff to reconsider the approach, the staff would revise the process as appropriate, revise and reissue this RIS to document the final approach, and complete the MOUs. On successfully completing an MOU with a State, the NRC would then amend each of the affected ISL licenses in that State at the request of each licensee, as mentioned above. Each amendment would be subject to an environmental review and a notice of opportunity for a hearing, in accordance with current NRC policy and practices.

Although implementation of this proposal would require the expenditure of additional staff resources to achieve the agreements before any resource savings could be realized, the proposal offers several advantages. Public health, safety, and environmental protection, with regard to ground-water, would be assured at licensed ISL facilities, through the State's direct oversight. The NRC will retain its authority to regulate ground-water protection at ISLs and could re-enter active regulation in this area if a State's program were no longer adequate. The effectiveness and efficiency of the NRC's ISL licensing program would be enhanced by making its active role clear to the licensee and other stakeholders. The current dual regulatory burden of the NRC and State reviews of the licensees would be eliminated once the agreement is finalized. In time, the initial outlay of resources to develop the MOUs would be more than offset by the gains from reductions of reviews.

#### REQUESTED INFORMATION

This RIS requires no specific action nor written response. However, interested parties may voluntarily comment on the proposed approach for deferring active regulation of ground-water protection at ISLs to EPA-authorized non-Agreement States and on the draft MOU provided in Attachment 1. Comments should be sent to:

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

The comment period will be open for 30 days from the date of this RIS.

This RIS contains information collections that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, et seq.). These information collections were approved by the Office of Management and Budget (OMB), approval number 3150-0011.

The public reporting burden for this voluntary information collection is estimated at 4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection.

#### Public Protection Notification

If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not collect nor sponsor, and a person is not required to respond to, the information collection.

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Robert C. Pierson, Director  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

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#### Attachments:

1. Draft Memorandum of Understanding
2. List of Recently Issued NRC Regulatory Issue Summaries

-EXAMPLE-

**MEMORANDUM OF UNDERSTANDING  
STATE OF \_\_\_\_\_ AND THE  
U.S. NUCLEAR REGULATORY COMMISSION**

**1. Purpose**

The purpose of this Memorandum of Understanding (MOU) between the U. S. Nuclear Regulatory Commission (NRC) and the State of \_\_\_\_\_ (State) is to establish the basis by which the NRC will defer active regulation and oversight of ground-water protection to the State at those licensed *in situ* leach uranium extraction facilities (ISL facilities) which the State exercises regulation and oversight through its UIC permitting authority. This MOU reflects the desire of the parties to cooperate in order to reduce or eliminate duplicative active regulation and oversight of ground-water protection at ISL of 1954, as amended (AEA) , and permitted for Underground Injection Control (UIC) by the State under the authority of the Safe Drinking Water Act, as amended, as delegated by the U.S. Environmental Protection Agency (EPA).

**2. Background**

Under sections 84,161, and 183 of the AEA, the NRC is responsible for protecting public health, safety and the environment from the radiological and nonradiological hazards associated with the processing of ore for its source material content. At ISL facilities this includes the extraction, concentration, processing, and possession of uranium and thorium as source material and the management and disposal of wastes resulting from the extraction of uranium and thorium for its source material content. The NRC implements its authority at ISL facilities by applicable regulations in Title 10 of the Code of Federal Regulations (10 CFR) Part 40, including applicable portions of Appendix A to 10 CFR Part 40; and applicable portions of 10 CFR Part 20. The NRC implements specific requirements, not contained in the regulations, by specific license conditions as a means of fulfilling its responsibilities under the AEA. The NRC provides guidance for achieving compliance with requirements through various Regulatory Guides and NUREG-1569, Standard Review Plan for In Situ Leach Uranium Extraction License Applications (NUREG-1569).

Ground-water protection at ISL facilities is one such area that the NRC regulates by specific license conditions. These license conditions include: 1) prescribing the sampling and analysis of specific radiological and non-radiological constituents in the groundwater; 2) setting numerical standards of those constituents for protecting ground-water quality; 3) prescribing specific placement, construction, and sampling frequency of monitoring wells; 4) prescribing

specific corrective action measures if exceedances are determined; and 5) requiring restoration of ground-water quality of economically depleted portions of the uranium ore zones to specific ground-water quality standards. The NRC conducts routine periodic inspection of the ISL facilities to assure compliance with regulatory and license requirements.

The State is responsible for ground-water protection at ISL facilities under authority of sections \_\_\_\_\_ [State Legislative Citation]. The State issues permits for underground injection control at ISL facilities under authority delegated by the EPA pursuant to sections 1421 *et seq.* of the Safe Drinking Water Act, as amended. The State UIC permits include: 1) prescribing the sampling and analysis of specific radiological and non-radiological constituents in the groundwater; 2) setting numerical standards of those constituents for protecting ground-water quality; 3) prescribing specific placement, construction, and sampling frequency of monitoring wells; 4) prescribing specific corrective action measures if exceedances are determined; and 5) requiring restoration of ground-water quality of economically depleted portions of the uranium ore zones to specific ground-water quality standards. The State conducts routine periodic inspection of the ISL facilities to assure compliance with regulatory and permit requirements. The State provides guidance for achieving compliance through various documents such as: [list State Guidance Documents].

The EPA performs a policy guidance and oversight role to the EPA-authorized State. The EPA provides consultation and coordination with the NRC on matters of ground-water protection at ISL facilities.

### **3. Principles of Cooperation**

- A. The NRC concludes that the State program for ground-water protection at ISL facilities provides adequate protection of public health, safety, and the environment equivalent to the NRC program. Accordingly, in light of the State's authority and State actions and in the interest of minimizing duplication of government efforts and reducing regulatory burden on the licensed/permitted entities, the NRC is exercising its regulatory discretion and deferring active regulation of ground-water protection at ISL facilities within the State as long as the State provides at least an equivalent level of protection for public health, safety and the environment as the ground-water protection program established by the NRC.
- B. However, the NRC will retain active regulation and oversight for the following ground-water areas where the State program does not provide at least the same level protection as the NRC program: [List Programmatic Areas]

- C. In addition, the NRC will retain active regulation and oversight of the uranium processing facilities, control of source material, and management and disposal of discrete surface wastes classified as 11e.(2) byproduct material, which include wastes generated from the restoration of ground-water.
- D. The NRC and the State will continue to work cooperatively for the issuance of a single financial assurance instrument to meet NRC's responsibilities under section 161x. of the AEA.
- E. Notwithstanding the above deferral, nothing in this MOU is intended to restrict or extend the constitutional or statutory authority of either the NRC or the State or to affect or vary the terms of future agreement between the State and the NRC under section 274b. of the AEA.

#### **4. Implementation**

- A. Subject to principle 3. B. above, upon execution of this MOU, the NRC will amend the existing ISL licenses for facilities in the State and will not impose specific license conditions for ground-water protection, and the NRC will not impose specific license conditions for ground-water protection when issuing licenses for new ISL facilities or renewing existing ISL licenses.
- B. The NRC will defer enforcement of ground-water protection requirements to the State except as noted in principle 3.B above.
- C. The State shall provide NRC with copies of all permits and inspection reports involving ground-water protection at ISL facilities.
- D. The State shall notify NRC of any significant change to its ground-water protection program.
- E. The State shall allow the NRC full access to State files and records involving ground-water protection at ISL facilities and make appropriate State staff available to NRC staff for the purpose of reviewing applications for termination of NRC licenses, and for the purpose of determining whether this agreement should be continued, amended, or terminated. In that regard, the State agrees that the NRC may review its ground-water protection program as necessary, including periodic reviews, and in response to petitions submitted under 10 CFR 2.206 of the Commission's regulations, to determine whether the program and its implementation remains equivalent to the NRC's program.

- F. The NRC shall re-instate active regulation of ground-water protection at ISL facilities within the State if: 1) the State's EPA authorization for UIC permitting is rescinded; 2) the State is not providing an equivalent level of protection for public health, safety, and environment and the State has not taken remedial action to remedy the matter within a reasonable time; 3) at the request of an ISL licensee; or 4) if this agreement is terminated.
  
- G. The State shall notify the NRC if EPA has notified the State that its EPA authorization for UIC permitting is in jeopardy of rescission. The State will also provide copies of any EPA evaluation of its UIC permitting program and the associated State responses. The NRC shall notify the State upon receiving any petitions submitted under 10 CFR 2.206 that could affect this MOU, or any licensee request to re-instate active regulation of ground-water protection.
  
- H. Except as noted in Principle 3.b. above, allegations concerning ground water issues under this MOU will be referred to the State.

**3. Points of Contact**

The NRC principal contact under this MOU shall be the Director of the Office of Nuclear Material Safety and Safeguards or his or her designee. The principal State contact shall be the Director of the \_\_\_\_\_ or his or her designee.

**4. Amendment and Termination**

This MOU may be amended or modified upon written agreement by both parties to the MOU, and may be terminated by either party upon 60 days of written notice.

**5. Effective Date**

This MOU shall take effect upon signing by the Governor of the State of \_\_\_\_\_ and the Chairman of the U.S. Nuclear Regulatory Commission.

For the State of \_\_\_\_\_.

Date at \_\_\_\_\_, \_\_ this \_\_\_\_ Day of \_\_\_\_\_, 20\_ .

\_\_\_\_\_  
Governor.

For the United States Nuclear Regulatory Commission.

Date at \_\_\_\_\_, \_\_ this \_\_\_\_ Day of \_\_\_\_\_, 20\_ .

\_\_\_\_\_  
Chairman.

LIST OF RECENTLY ISSUED  
NRC REGULATORY ISSUE SUMMARIES

Regulatory Issue Summary No.	Subject	Date of Issuance	Issued to
2004-01	Method for Estimating Effective Dose Equivalent from External Radiation Sources Using Two Dosimeters	02/17/2004	All U.S. Nuclear Regulatory Commission (NRC) licensees.
2003-18	Use of NEI 99-01," Methodology for Development of Emergency Action Levels," Revision 4, Dated January 2003	10/08/2003	All holders of operating licenses for nuclear power reactors and licensees that have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.
2003-17	Complying with 10 CFR 35.59, "Recentness of Training," for Board-certified Individuals Whose Training and Experience Were Completed More than 7 Years Ago	10/03/2003	All U.S. Nuclear Regulatory Commission (NRC) medical-use licensees and NRC master materials license medical-use permittees.

**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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