

POLICY ISSUE NOTATION VOTE

October 29, 2003

SECY-03-0186

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: OPTIONS AND RECOMMENDATIONS FOR NRC DEFERRING ACTIVE
REGULATION OF GROUND-WATER PROTECTION AT *IN SITU*
LEACH URANIUM EXTRACTION FACILITIES

PURPOSE:

To present three options and obtain Commission approval of the U.S. Nuclear Regulatory Commission (NRC) staff's recommendations for deferring active regulation of ground-water protection¹ at *in situ* leach (ISL) uranium recovery facilities.

SUMMARY:

Since 2000, the staff has held several public meetings with uranium recovery industry representatives and licensees, and several closed meetings (with publicly available meeting summaries) with regulators from non-Agreement States, Agreement States whose §274 Agreement do not include authority over 11e.(2) byproduct material, and the U.S. Environmental Protection Agency (EPA), to develop various approaches for reducing or eliminating dual regulation of ground-water protection at ISL uranium facilities licensed by the NRC. As a result, the staff has developed two options (in addition to the option of continuing the current staff program that does not reduce dual regulation) for reducing or eliminating duplicative NRC reviews of ground-water protection issues at NRC-licensed ISL facilities,

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¹In the context of this paper, ground-water protection applies to the ground water in the ore zones and adjacent ground water that could be affected by activities in the ore zones at *in situ* leach facilities. NRC has additional responsibility to protect near-surface ground water from the effects of surface operations and spills at such facilities (e.g., leakage from a surface pond). Protection of near-surface ground water from the effects of surface operations is not included in the options discussed in this paper.

including both operating sites and those in decommissioning status. One of these options can be implemented in either of two ways. The licensed sites currently affected by this proposal are in Wyoming and Nebraska. The Wyoming sites (four locations) are contained in two licenses and the Nebraska site is contained in one license. New Mexico is not currently affected. However, NRC has received an application for an ISL facility located in New Mexico. Wyoming is a non-Agreement State. Nebraska and New Mexico are Agreement States whose §274 Agreements do not include authority for 11e.(2) material. For the purpose of this document, the term non-Agreement will refer to 11e.(2) material authority only, and thus is applicable to Wyoming, Nebraska, and New Mexico.

BACKGROUND:

The Commission reaffirmed the NRC's authority to regulate all waste waters from ISL facilities as 11e.(2) byproduct material, in Staff Requirements Memorandum (SRM) SECY 99-013, dated July 26, 2000, but recognized that dual regulation of ground-water protection at these facilities would exist between the NRC and the EPA or the EPA-authorized States. SRM SECY 99-013 also approved staff continuing discussions with EPA and the appropriate EPA-authorized States, to determine the extent to which NRC could rely on the EPA Underground Injection Control (UIC) Program for ground-water protection reviews, minimizing the NRC involvement in that aspect of ISL facility regulation. In addition, the Commission directed the staff to include in those discussions appropriate methods for implementing any agreements, including Memoranda of Understanding (MOUs) or language, in a new 10 CFR Part 41.

The staff held two meetings with EPA at its Headquarters on October 10, and November 29, 2000. The summaries of these meetings are provided in Attachments A and B. EPA indicated in these meetings and in written comments submitted to the NRC that, at the Federal level, it viewed NRC's ISL licensing program and the EPA UIC programs as complementary and not duplicative. EPA did indicate that several States use the Federal UIC program as a minimum requirement and enforce additional standards, which may duplicate NRC's licensing requirements. The NRC agreed with EPA that in some instances duplication of ground-water protection activities existed between the NRC and the non-Agreement States, with EPA-approved UIC programs. Staff discontinued development of a new Part 41, in accordance with SRM SECY 01-0026, dated May 29, 2001.

The NRC staff held closed meetings with non-Agreement State regulators and other Federal regulators during the annual Uranium Recovery Workshops in 2001 and 2002, to discuss the issue of dual ground-water regulation at ISL facilities. The NRC presented a proposal at each of these meetings, for reducing or eliminating dual ground-water regulation. The meeting summaries of these two meetings are provided in Attachments C and D. The details of these proposals are provided in the following section.

DISCUSSION:

The staff proposed a framework for reducing duplication of ground-water protection reviews, to the non-Agreement States, at the Uranium Recovery Workshop in 2001. Attachment C provides a summary of that meeting. That framework generally provided that:

1. NRC would conduct its review after the State has completed its analysis and use the State's analysis as part of the basis for the licensing action.
2. NRC would still perform its National Environmental Policy Act (NEPA) review, but may use the State's detailed review to support the NEPA documentation.
3. NRC would use the ISL Standard Review Plan, NUREG-1569 as a guideline for examining the State's review.
4. NRC would accept the State's review as a basis for NRC's licensing action if the review adequately addressed the acceptance criteria outlined in NUREG-1569.

The concept of considering technical evaluations conducted by States and attempting to avoid duplicative reviews is discussed in Sections 6.1 and 6.1.3 of the ISL Standard Review Plan, NUREG-1569, which was issued for public comment by Notice in the Federal Register on February 5, 2002 and published in final form in June 2003. The NUREG was provided to the Commission as an attachment to SECY 02-0204, dated November 15, 2002. SECY 02-0204 provides the analysis of public comments received on NUREG-1569 and NRC's responses addressing those comments. No comments were received on the above-described concept.

Verbal feedback from the States of Wyoming, Nebraska and New Mexico, on the framework was not generally supportive. The States expressed concerns over conflicting technical and regulatory interpretations, State-specific issues such as water rights and water-quality standards, and the resource impacts associated with individual reviews if no formal agreement were in effect. The States also indicated that they would not be willing to provide the resources to defend a State's technical review, if NRC relied on the State's review for one of its licensing actions and that action were challenged in an NRC hearing.

At the Uranium Recovery Workshop in 2002, the staff proposed an approach to the non-Agreement States that would eliminate duplicative ground-water reviews. Attachment D provides a summary of that meeting. Staff proposed that:

1. NRC would retain its authority provided by the Atomic Energy Act of 1954, as amended, to regulate ground-water protection at ISLs.
2. NRC would defer active regulation of the ground-water protection aspects of ISL operations to a non-Agreement State authorized to administer the EPA's UIC program at ISL facilities, if the State entered into an MOU with the NRC.
3. ISL facilities in Agreement States, such as Texas, authorized to administer EPA's UIC Program, would not be impacted by this proposal. However, an Agreement State, such as Colorado, not authorized to administer EPA's UIC program, could choose to pursue an individual agreement with EPA for reducing or eliminating dual regulation of ground-water protection. At present, no ISL uranium facilities are licensed in an Agreement State that is not a UIC EPA-authorized State.

At the 2002 workshop, the States of Nebraska and Wyoming responded favorably to this proposal. The staff received letters from Nebraska, Wyoming, and the National Mining Association supporting the pursuit of this proposal (see Attachment E). The staff also met with EPA Headquarters staff on September 4, 2002, to brief them on the status of NRC's interactions with the EPA-authorized, non-Agreement States, and to request its continued consultation and guidance involvement, if the Commission pursues MOUs with the non-Agreement States. The staff views EPA's continued consultation and guidance role as crucial to assure that no regulatory gaps will occur in the Federal ground-water protection program for ISLs.

The State of New Mexico was not able to attend the 2002 meeting, and has not expressed an opinion on this proposal. The NRC does license the Hydro Resources, Inc. (HRI) ISL project in New Mexico. However, this facility has not been built yet, pending the outcome of the NRC hearing on the licensing of the HRI operation.

As a result of interactions with the non-Agreement States and EPA, the staff requests Commission consideration of three options. All these options assure protection of public health, safety, and the environment at ISL facilities. Two of these options would reduce or eliminate NRC duplicating regulatory reviews of ground-water protection for licensed operations.

Option 1 - Reduce or eliminate duplicate ground-water protection reviews by placing greater reliance on technical reviews performed by non-Agreement States, to support NRC licensing actions.

This option would follow the framework for conducting licensing reviews for ground-water protection, as now presented in NUREG-1569. NRC would not conduct its review until the State has completed the technical review. Staff would compare the State's review with the acceptance criteria in NUREG-1569, and if appropriate, rely on the findings from the State's review to support NRC's licensing action. Staff would continue to document the licensing basis and environmental review in Safety Evaluation Reports and Environmental Assessments or Environmental Impact Statements, as appropriate.

Advantages

Public health, safety, and environmental protection would be assured at licensed ISL facilities. A measure of increased efficiency and effectiveness would be achieved by conducting an acceptance-level review of the State's technical analysis. The current regulatory burden on the licensees of additional NRC reviews would be somewhat reduced.

Disadvantages

There would be no change to NRC's inspection role at these sites. The staff expects to be able to rely on the State's action for the licensing decisions, but resources probably would be needed to support the technical findings for a licensing action, if that action were challenged in an NRC hearing. Nebraska and Wyoming have verbally stated that these States would not provide resources to defend their technical reviews in an adjudication; therefore, NRC's use of a State's technical review should be based on the recognition of that potential limitation. In general, a State's permitting or approval

documentation is summary in nature, similar to the level of detail contained in NRC approval documentation. Although the staff would continue to document the licensing basis and environmental review, it would probably need additional detailed technical analysis to respond to public inquiries and challenges or to support a hearing.

Reviewing the State's entire file for the review, prior to preparing NRC documentation of the licensing basis, would increase the NRC effort and thus reduce or eliminate potential savings.

Option 2 - Defer active regulation of ground-water protection at ISLs to EPA-authorized non-Agreement States through: (a) the development of MOUs with individual affected States; or (b) rulemaking.

The outcome of this option would be to completely remove the duplication of ground-water protection reviews and inspections now being performed by both the NRC and non-Agreement States. Staff considers there are two viable approaches, by which the NRC could retain its authority in this area and exercise discretion to defer active regulation of ground-water protection at ISL facilities to EPA-authorized, non-Agreement States.

Approach 2(a) This approach for Option 2 proposes to enter into agreements (MOUs) with individual States to defer active regulation of both licensing and inspection activities for ground-water protection. Achieving a final MOU 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 (NMSS), requesting agreement to begin the MOU process. As a part of the agreement process, staff would work with each State to compare each State's ground-water protection program with that of the NRC. This comparison would examine the general review areas and staffing at the State, similar to an Integrated Material Performance Evaluation Program-type review performed for Agreement States.

Any areas determined not essentially equivalent to the NRC program would be identified in the MOU as areas where NRC would continue its direct regulatory oversight. 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. The NRC would enter into an MOU with that 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. Staff proposes to use NUREG-1569, the ISL Standard Review Plan, as the basis for performing the programmatic comparison with the State.

Based on the staff's experience in working with Wyoming and Nebraska, we expect that the comparison would result in a finding of equivalence of those States' ground-water protection programs to NRC's.

The staff's preliminary conclusion is that the Wyoming program is essentially the same as NRC's. Irigary was the first commercial ISL license that both the NRC and Wyoming reviewed. As a result, staff in the former Uranium Recovery Field Office in Denver worked closely with staff from the Wyoming Department of Environmental Quality to assure that the NRC and State programs were essentially the same. The Branch Technical Positions (BTPs) that were developed by NRC staff and the Wyoming Guidelines on ISLs use much of the same language.

Those BTPs were used as the basis for NUREG-1569; thus, we expect to find the Wyoming program equivalent to NRC's. Additionally, in conducting groundwater inspections of Wyoming ISL facilities over the years, we have not found any gaps between requirements the State places on licensees and NRC's requirements. Finally, the practice of Wyoming ISL applicants and licensees is that when they submit an application to the NRC for a new license or a license renewal, the licensee provides its Wyoming UIC permit application, supplemented only with a chapter on radiation protection.

Nebraska essentially adopted the Wyoming program when it started looking at the Crow Butte ISL application in 1988. However, staff interactions with Nebraska indicate that one gap that may exist in the State's program compared to NRC's, relates to how it conducts reviews for groundwater restoration. Nevertheless, it is possible that during the MOU negotiation process, the State could make modifications to its program such that continued direct oversight by the NRC in groundwater protection would not be needed.

Once an agreement was in force, 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 Regulatory Issues Summary (RIS) and MOU. 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 NRC's licensing and inspection programs would be deferred to the State.

If the Commission approves this approach to Option 2, the staff would issue a RIS for comment, outlining the MOU approach and the elements of an acceptable MOU, as a means of obtaining stakeholder and public input for deferring regulation to the States. The staff would complete the MOU process, absent any comments that would cause the staff to reconsider this approach. Upon successfully completing an MOU with a State, the NRC would then amend each of the affected ISL licenses in that State. 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. Attachment F provides a draft MOU, which would serve as an outline for the RIS, and would also serve as a starting point for discussions with any interested State.

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. 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 was no longer adequate. Effectiveness and efficiency of 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 NRC and State reviews on 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. The RIS publication will provide a mechanism for obtaining early public involvement in developing the details of deferring active NRC regulation.

Disadvantages

Implementing this option would require the expenditure of additional staff resources across several Offices to achieve the agreements, before any resource savings would be realized. Although a common agreement would be sought, each State would have to be approached separately, which might impact the potential for an economy of scale in developing multiple agreements. In addition, because there would be an opportunity for an adjudicatory hearing on each amendment, there could be time- and resource-consuming administrative hearings on some of the amendments to implement this approach, where litigants seek to essentially litigate the adequacy of ground-water protection for each particular facility. At this time, staff estimates this could encompass three licenses in two States.

Approach 2 (b) This approach would accomplish the same deferral of active regulation as previously described in Approach 2(a), except that it would be accomplished through a rulemaking process. Rulemaking would be used to promulgate NRC's general performance measures for ground-water protection; and subsequently, through additional rulemaking, list States where NRC would no longer directly oversee ground-water protection, based on a finding that a State's program would provide adequate protection of public health and safety, and the environment, equivalent to the NRC program. The NRC would then remove the ground-water protection conditions from each ISL license within that State, through an administrative amendment, after the State's program was found acceptable.

The rulemaking to establish the general performance measures would likely be a rule of medium complexity. Staff views the subsequent rulemakings to list the States where NRC would no longer directly oversee ground-water protection would be similar to the cask certification process in 10 CFR Part 72. An environmental review for this rulemaking would be conducted, in accordance with current NRC policy and practices. Any challenge to the factual finding of the adequacy of the State's program would be addressed during the notice and comment in the initial rulemaking process rather than in the adjudicatory hearings under Approach 2(a). A RIS would not be necessary, because the rulemaking process would provide for public involvement. However, an MOU or a similar agreement might be necessary with each State to establish the process for determining the adequacy of the State's program.

Advantages

The advantages of this approach are similar to those listed for Approach 2(a), with three additions. Rulemaking provides a more formalized process to obtain public comments and provides the underpinning of the deferral process. It may provide a less resource-intensive process to resolve disputes, in particular if there is litigation which challenges the amendments under Approach 2(a). Rulemaking could allow implementation with all EPA-authorized non-Agreement States that could potentially permit uranium ISL facilities. At this time, New Mexico is the only State that would be included in that category; however, other States could be affected if the economics of the uranium recovery industry improve.

Disadvantages

The outlay of staff resources to conclude several rulemakings, which would apply to essentially only three licensees, would be borne by other uranium recovery licensees,

who have repeatedly petitioned the Commission for fee relief because of poor economic prospects of the uranium recovery industry. The cost for this approach would be incrementally higher than Approach 2(a) by the cost of NRC's rulemaking effort, since both approaches would necessitate the development of some agreement with each State. The time involved for rulemaking would be longer than for Approach 2(a). Initiating rulemaking for only one uranium recovery policy issue while other such issues have been addressed by other means, in accordance with SRM SECY 01-0026, may appear piecemeal.

Option 3 - Continue with the current licensing review program of staff performing independent technical reviews of license amendment requests, separate from the reviews conducted by the UIC-permitting States.

This option maintains the current licensing review program. The staff would use the acceptance criteria contained in NUREG-1569 to evaluate the acceptability of license amendment requests. Routine inspections of ground-water compliance issues would continue at the current schedule of once every 2 years, unless a shorter frequency was warranted for a particular licensee.

Advantages

Public health, safety, and environmental protection would be assured at licensed ISL facilities.

Disadvantages

The current dual regulatory burden of additional NRC and State reviews on the licensees would remain unchanged, with no additional enhancements in the effectiveness and efficiency of regulatory reviews or inspections, and no perceived increases in public confidence. Unnecessary regulatory burden would not be reduced.

RESOURCES:

The following resource estimates are approximate, given the broad range of the options, and are provided for a comparison among the various options presented in this paper. The level of detail contained in these estimates is not sufficient to support planning and budgeting decisions. Additional detailed estimates must be performed for making those decisions. None of the resource estimates for these options has been incorporated in the current budget planning period.

Option 1 - Reduce or eliminate duplicate ground-water protection reviews by placing greater reliance on technical reviews performed by non-Agreement States to support NRC licensing actions.

Staff estimates this option would likely save approximately 0.1 full-time equivalent (FTE) per year in licensing resources, by using the framework described in NUREG-1569 for routine licensing actions. No resource savings are expected for inspections, since NRC would continue to inspect for ground-water protection, according to the current inspection schedules. The staff

recognizes that it might need to expend resources to defend the State's technical review. However, the staff is not in a position to estimate that cost.

Option 2 - Defer active regulation of ground-water protection at ISLs to EPA-authorized non-Agreement States through: (a) the development of MOUs with individual affected States; or (b) rulemaking.

The estimated costs for both approaches are provided in the following table:

Option 2 Resource Estimates			
Approach 2(a)-RIS/MOUs		Approach 2(b)-Rulemaking	
Tasks	FTE	Tasks	FTE
Regulatory Issues Summary Draft RIS Publish for Comment Address Comments & Finalize	0.2	Rulemaking - NRC Performance Measures Prepare Rulemaking Plan Draft Rule Publish for Comment Address Comments & Finalize	3.0
State Program Adequacy (2 States) Negotiate MOU Conduct Adequacy Review Document Findings	0.4	State Program Adequacy (2 States) Negotiate Agreement Conduct Adequacy Review Document Findings	0.4
Amend Licenses (3 total)* Federal Register Notice/ Opportunity for Hearing Environmental Review Federal Register Notice/ FONSI	0.1	Rulemaking - State Program Acceptance (2 States) Direct Final Rule	1.0
		Amend Licenses (3 total) Administrative Amendment	Nil
TOTAL	0.7	TOTAL	4.4
* Litigation cost was not factored into this resource estimate, since it is speculative whether a hearing would be requested.			

Staff estimates that approximately 0.2 FTE of inspection and licensing resources will be saved under Option 2 for each year after regulatory deferrals to Wyoming and Nebraska are completed. (For comparison, 3.8 FTE are budgeted for all uranium recovery licensing and inspection activities in FY04. This includes licensing reviews and inspections at ISLs and conventional mills, but does not include reviews of reclamation plans and alternate concentration limit requests.) Future deferrals could be implemented as needed (e.g., when the HRI facility completes its UIC permitting process with New Mexico), or if new applications were received in other non-Agreement States. Some resources would be needed to periodically review a State's activity, but these are not expected to be significant.

NMSS will support the resource needs for Option 2, using either approach, through the Planning, Budgeting and Performance Management process.

Option 3 - Continue with the current licensing review program of staff performing independent technical reviews of license amendment requests, separate from the reviews conducted by the UIC-permitting States.

Staff estimates this option would require no additional resources above those estimated in the current budget planning period. Likewise, there would be no savings of staff resources for this option.

The table below summarizes the effects of the options discussed on the staff, licensees, and States.

Summary of the Effects of the Options

	Option 1	Option 2a	Option 2b	Option 3
NRC review & inspection savings (FTE/yr)	0.1	0.2	0.2	-
NRC cost to put into place (FTE)	-	0.7	4.4	-
Licensee cost savings (\$/yr) ²	\$56K	\$112K		-
Ground water regulatory burden on licensees	less NRC regulatory burden	minimal NRC regulatory burden		dual State and NRC regulatory burden
State reaction	negative	positive		neutral

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection. The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objection.

RECOMMENDATION:

That the Commission adopt Option 2, Approach 2(a): “Defer regulation of ground-water protection at ISLs to EPA-authorized non-Agreement States through development of MOUs,” because of the potential to achieve the outcome with fewer resource and time needs. The cost

² Licensee savings are the sum of NRC fees and licensee internal costs saved for document preparation and interaction with NRC. Licensee internal costs saved are assumed to be equal to NRC fees saved. Costs are based on \$280,876 per FTE.

of this option appears reasonable. If the Commission approves Approach 2(a) - Option 2 , the staff will develop and publish a RIS, then proceed to develop MOUs, consistent with Attachment F.

This paper does not contain sensitive information. The staff requests that this paper be made publicly available at the Commission's earliest convenience.

/RA/

William D. Travers
Executive Director
for Operations

Attachments:

- A. EPA/NRC Meeting Summary, October 10, 2000
- B. EPA/NRC Meeting Summary, November 29, 2000
- C. NRC/EPA/States Meeting Summary, June 12, 2001
- D. NRC/EPA/States Meeting Summary, June 11, 2002
- E. Letters of Endorsement from Nebraska, Wyoming, and NMA
- F. Proposed Preliminary MOU with non-Agreement States

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*see previous concurrence

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