

April 17, 2008

MEMORANDUM TO: Chairman Klein
Commissioner Jaczko
Commissioner Lyons
Commissioner Svinicki

FROM: Luis A. Reyes **/RA Bruce Mallett for/**
Executive Director for Operations

SUBJECT: STATUS OF DEVELOPMENT OF PROPOSED RULE FOR
GROUNDWATER PROTECTION AT *IN SITU* LEACH URANIUM
RECOVERY FACILITIES

The purpose of this memorandum is to inform the Commission about the status of the development of the proposed rule for groundwater protection at *in situ* leach (ISL) uranium recovery facilities, including the latest interactions with the staff from the U.S. Environmental Protection Agency (EPA). As a result of these interactions, staff plans to delay the rule and will provide the proposed rule package to the Commission by October 2008.

In Staff Requirements Memorandum (SRM) COMJSM-06-0001, "Regulation of Groundwater Protection at *In-Situ* Leach Uranium Extraction Facilities," dated March 24, 2006, the Commission directed the staff to initiate a rulemaking effort specifically tailored to groundwater protection programs in the well-field production zone at ISL uranium recovery facilities. The Commission directed that the rule focus on eliminating dual U.S. Nuclear Regulatory Commission (NRC)/EPA regulation by deferring regulation of groundwater protection to EPA and EPA-authorized States, through their underground injection control (UIC) programs. The Commission also specified that the staff should work closely with EPA, EPA-authorized States, and other interested stakeholders in the rulemaking effort.

After the NRC staff contacted EPA regarding the staff's intent to develop a new rule for groundwater protection at ISL uranium recovery facilities, the EPA questioned the underlying standard on which the NRC planned to base the new regulation. This led to a halt in the development of the regulation until the issue was resolved between the EPA and the NRC. In COMSECY-07-0015, "Path Forward for Rulemaking on Groundwater Protection at *in situ* leach Uranium Extraction Facilities," dated April 30, 2007, the staff provided the Commission with the status of the staff's effort including resolution of the issue with EPA, at that time. The COMSECY requested that the Commission approve the staff's recommendation to resume the rulemaking process and conform to Title 40 of the *Code of Federal Regulations* (CFR) Part 192 "Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings." This

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request deviated from previous Commission direction (i.e., conform to EPA's underground injection control program) in order to address the concerns raised by the EPA that the underlying standard of the proposed rule should be the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA). When COMSECY-07-0015 was issued, the staff believed that the EPA's outstanding issues had been addressed, and that rule development could proceed.

In the SRM to COMSECY-07-0015, the Commission approved resumption of the rulemaking process and directed the staff to remain diligent in working with the EPA and the appropriate States to establish appropriate standards to protect public health and safety and the environment and at the same time reduce, and preferably eliminate, dual regulation. As a result of this direction, the staff expanded the existing rulemaking working group to include two representatives from the EPA (one representative from the Office of Air and Radiation and one representative from the Office of Water and one new representative from the Conference of Radiation Control Program Directors). The working group already consisted of NRC headquarters staff, an NRC regional representative, and a representative from the Organization of Agreement States.

In late August 2007, the staff sent the working group a draft proposed rule language for review in preparation of a September 2007, working group meeting. In this draft, the NRC proposed to amend Appendix A of 10 CFR Part 40 "Domestic Licensing of Source Material," by adding a new Criterion specific to groundwater protection at ISL uranium recovery facilities. The rule language was primarily based upon existing guidance in NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications," and borrowed extensively from the EPA's underground injection control program regulations for technical compliance, operation, and closure of wells in 40 CFR 144, "Underground Injection Control Program," and 40 CFR 146, "Underground Injection Control Program: Criteria and Standards." The purpose for using these resources was to make the rule reasonably consistent with current NRC and EPA practices.

During the September working group meeting, the EPA staff identified problems it had with the draft rule language, and asked that the NRC and the EPA have a meeting separate from the working group to discuss the EPA's concerns. The EPA staff requested that the rule's further development should be deferred pending resolution of their following concerns: (1) the scope of the proposed rule; (2) the lack of reference to requirements in UMTRCA; (3) the use and paraphrasing of the EPA's UIC rule language; and (4) the handling of issues dealing with dual regulation.

Meetings involving the NRC and the EPA staff and management were held in November and December 2007, and January 2008, to discuss these concerns. Based on these meetings, the following agreements were reached concerning the proposed rule:

- (1) The EPA had initially expected rule language that would be explicitly tailored to both ISL surface and underground uranium recovery facilities and operations that was parallel to the current Criterion 5 in Appendix A of 10 CFR Part 40. The NRC staff explained that the Commission, in its SRMs, had directed the staff to limit the scope of the proposed rulemaking to only those issues related to ensuring groundwater protection at ISL uranium recovery facilities. The staff explained that existing criteria in Appendix A still applied to ISL facilities and rule language was meant to only clarify potential gaps in Appendix A for groundwater protection as they apply to ISL facilities. The draft rule

language was modified to better indicate the applicability of other parts of Appendix A and the issue will be discussed in the statement of considerations.

- (2) The existing Appendix A language is already based on UMTRCA, the NRC staff revised its August draft rule language to more clearly indicate the applicability of UMTRCA-based requirements as the underlying standard in the draft rule language. The statement of considerations for the proposed rule will further expand upon this.
- (3) The EPA indicated concerns that use of the UIC language could lead to future problems from the potential for differences in agency interpretations of similar language and who had regulatory jurisdiction. Based on legal discussions between both agency staffs, the EPA agreed that the use of some UIC language regarding well construction, operations, and closure was acceptable and that both agencies had jurisdiction based upon separate statutes. EPA specifically requested that the NRC rule minimize the use of the UIC regulatory terms "exempted aquifer" and "underground sources of drinking water." NRC staff agreed not to use these terms in the ISL rule language to the extent possible.
- (4) The EPA was concerned about the impacts of dual regulation and any conflicts that may occur between EPA's and the NRC's regulations. Although NRC believes that EPA's involvement will minimize such conflicts, the actual implementation during the permitting and licensing process could still result in some differences in requirements. In most cases, these differences will require the ISL uranium recovery facility to implement the more conservative requirements. If any direct conflicts are identified, the NRC and the EPA staff will work together to resolve the issues. This process and the possible procedures for deferring certain requirements to one single agency, to minimize dual regulation burdens, will be addressed in the proposed rule's statement of considerations. The staff noted in the meetings that dual regulation has existed for many years and the staff is unaware of any conflicts that have been raised by licensees, with exception of the different restoration standards between UIC and UMTRCA regulations.

Based on the management meeting discussions, the EPA staff agreed that EPA's high-level concerns had been reasonably addressed and that the rulemaking should continue through NRC's normal rulemaking process at the working group level. Although the EPA staff still had comments and recommendations on the draft rule language provided in January 2008, these were technical, rather than policy related matters, and it was agreed that they can be resolved at the working group level.

Because the EPA's concerns took a lengthy period of time to resolve, the NRC staff will not be able to provide a proposed rule to the Commission in April 2008, as currently scheduled. Although the NRC staff is currently reviewing some applications for ISL uranium recovery facilities, and expects more in the near future, the staff does not believe the delay in this rulemaking will substantially impact the industry. The NRC staff plans to continue to review applications using existing 10 CFR Part 40, Appendix A, and guidance in NUREG-1569 until the rulemaking is completed. The groundwater restoration standards applied in the interim will be from 10 CFR 40, Appendix A Criterion 5 B(5). The new rule is not expected to significantly change the licensing requirements for these facilities and will clarify the requirements for ISLs and provide the industry and public with more predictability during the licensing process.

The NRC staff expects to provide the Commission the proposed rule package by October 31, 2008, and the final rule package in October 2009. While the proposed rule is out for public comment, the staff plans to hold stakeholder meetings to allow stakeholders an additional opportunity to provide comments as well as allow the staff to respond to questions requesting clarification of any aspects of the proposed rule. Throughout the rulemaking process, the staff plans to continue its extensive interactions with the EPA and the States.

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