STAFF RESPONSE TO CONCERNS RAISED IN AUGUST 24, 2009, LETTER FROM MESSRS. THOMPSON AND PUGSLEY

This provides responses to the August 24, 2009, letter from Mr. Thompson and Mr. Pugsley to Mr. Borchardt, Executive Director for Operations, concerning the processing of uranium recovery license applications.

Concern #1:

Concern was expressed about the perceived lack of consistency and predictability in the U. S. Nuclear Regulatory Commission's (NRC's) licensing process, which, it is alleged, has hampered preparation of uranium recovery license applications, as well as company projections for the completion of licensing. In this regard, the letter offers that decisions made by NRC over the last several years, in relation to development of the regulatory infrastructure or framework for uranium recovery facility licensing, have resulted in delays in new facility licensing and uncertainty in the licensing process.

Response:

The NRC's regulatory program for uranium recovery facilities has undergone a change of focus over the past several years. Prior to 2007, the Uranium Recovery Program was focused on the decommissioning of shut-down mills and the oversight of a few operating facilities. However, renewed interest in domestic nuclear power generation in recent years resulted in a corresponding interest within the uranium recovery industry to produce the needed source material to fuel the nation's reactors. When the first applications for new uranium recovery facilities were submitted in 2007, the regulatory framework for licensing was somewhat dated. Accordingly, in parallel with the review of the new applications, the staff initiated a number of important activities to update the regulatory framework for the Uranium Recovery Program, especially those program aspects related to in-situ recovery (ISR) facilities. The staff also began to align staff resources and contract support with the expected submittal of the new applications.

The staff undertook the following activities to enhance the Uranium Recovery Program regulatory framework:

- Preparation of a Generic Environmental Impact Statement (GEIS) for ISR facility applications (Issued June 5, 2009).
- Preparation of a Regulatory Issue Summary (RIS) on the applicability of 10 CFR Part 40, Appendix A, Criterion 5B(5), for groundwater restoration at ISR facilities (RIS 2009-05, Issued April 29, 2009).
- Updating NUREG-1569, the Standard Review Plan for ISR facilities (in progress).
- Rulemaking with the U.S. Environmental Protection Agency (EPA) for protection of groundwater at ISR facilities (in progress).
- Preparation of a RIS for allowable site preparation activities prior to licensing (draft issued for public comment on March 27, 2009 and RIS 2009-12 issued September 23, 2009).
- Preparation of a RIS on the licensing approach for ISR facility application scenarios (in progress).
- Updating a number of Uranium Recovery Program regulatory guides as part of the overall agency regulatory guide update program (in progress). Revision 3 of Regulatory

Guide 3.11, "Design, Construction, and Inspection of Embankment Retention Systems for Uranium Mill Tailings," was issued in November 2008.

Given limits on staffing, these activities necessarily took place in parallel with the review of new applications. While the staff's decisions to initiate the aforementioned regulatory framework development activities in parallel with new application reviews might have caused some delay in the review of the earliest applications, the staff believes that the efficiencies gained from the improvements to the regulatory framework, most importantly the completion of the ISR GEIS, will far outweigh the potential adverse impacts of these efforts, especially in light of the significant number of uranium recovery license applications expected over a period of several years (26 applications by 2012, 8 received to date). The enhancement of the regulatory framework will also bring increased predictability and consistency to the licensing process.

With respect to issues raised in the letter regarding the GEIS, the staff decided to prepare the GEIS primarily for the savings in staff resources when compared to the costs for preparing site-specific Environmental Impact Statements (EISs) for each ISR application. As the staff discussed with Uranium One representatives in May 2009, a Supplemental Environmental Impact Statement (SEIS) tiered off the GEIS is expected to require approximately 6 fewer months and approximately one million fewer dollars to complete when compared to the time and cost for a site-specific EIS. Although the time savings provided by tiering environmental reviews off the GEIS will not be fully realized for the first three reviews, all but one of the seven SEISs NRC currently has planned to prepare will be completed within the 2-year time frame originally discussed with applicants.

Concern #2:

Concern was expressed regarding the additional time required for the review for the Moore Ranch facility.

Response:

The staff is committed to maintaining an efficient review process. But review schedules for individual applications are dependent on the need for additional information, timeliness of applicant responses to requests for additional information (RAIs) and open items, the establishment of contractor support, and the need to thoroughly consider public input (e.g., comments on draft SEISs) as part of the environmental review process.

The NRC staff has taken several actions to ensure review timeliness. In response to contracting issues that affected environmental reviews of the first three ISR applications, staff initiated an acquisition strategy to address time constraints in developing and issuing contracts. In addition, the staff has implemented procedures to integrate the environmental and safety reviews and hold periodic meetings with legal counsel to ensure alignment of these reviews. While completion of the licensing review for Moore Ranch is likely to extend beyond the 2 year target for completion of licensing reviews, the delay in Uranium One's responses to RAIs and open items contributed significantly to this extension. The staff does not consider the few month delay substantial given the delay in response to RAIs, extension of the GEIS comment period, extensive comments on the GEIS, and the NRC's decision to issue a SEIS rather than an environmental assessment.

Concern #3:

Concern was expressed regarding the applicability of 10 CFR Part 40, Appendix A, Criterion 5B(5), to the restoration of groundwater at ISR facilities following the cessation of uranium recovery activities at individual wellfields. The letter stated that, based on a prior meeting with EPA representatives, the EPA disagreed with the NRC on the applicability of Criterion 5B(5) to ISR facility groundwater restoration, as described in the staff's April 29, 2009, RIS (NRC RIS 2009-05).

Response:

The staff has recently conferred with EPA staff on this matter and determined that there is mutual agreement on the applicability of Criterion 5B(5) to groundwater restoration at ISR facilities. In this regard, the requirements in Criterion 5B(5) conform to the groundwater protection standards established by EPA in 40 CFR Part 192, consistent with the mandates of the Uranium Mill Tailings Radiation Control Act of 1978.

Uranium One's position, as expressed in the letter, is that the aforementioned RIS is inconsistent with current Commission policy and other agency positions and that it should be withdrawn. As discussed in the RIS, the staff acknowledges that the existing guidance in NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications," for groundwater restoration standards is not consistent with the requirements in Criterion 5B(5). Nonetheless, the statutory underpinnings for the applicability of Criterion 5B(5) to ISR facility groundwater restoration are well-founded and the RIS provides advance notice of NRC's policy on this issue. As such, the staff will not withdraw the RIS. These matters have been discussed and addressed in public meetings over the last several years, including NRC's intent to codify appropriate groundwater protection standards in a coordinated rulemaking effort with the EPA. Specifically, the NRC and EPA met with the National Mining Association (NMA) on March 15, 2007, to discuss the ISR rulemaking effort and the EPA discussed appropriate groundwater protection standards with the uranium recovery industry on April 30, 2008, at the NMA/NRC Uranium Recovery Workshop.

Concern #4:

Concern was expressed over the utility of the existing guidance in NUREG-1569 regarding the preparation of license applications for new uranium recovery facilities. The letter also made reference to NRC's ongoing effort to update Uranium Recovery Program regulatory guides and the uncertainty this poses with respect to the preparation of complete license applications.

Response:

As noted in RIS 2009-05, the staff recognizes the need to revise the groundwater restoration guidance in NUREG-1569 to be consistent with the requirements that may result from the ongoing rulemaking effort. However, this planned revision does not invalidate the present utility of NUREG-1569. The majority of NUREG-1569 is still appropriate for the preparation of license applications and the document should continue to be used by the industry for this purpose. Regarding NRC's regulatory guide update program, in general, the existing versions of virtually all of the pertinent regulatory guides can, and should, be used to support the preparation of licensing documents. In the rare case where portions of a regulatory guide were found to be

technically incorrect or deficient (e.g., Regulatory Guide 8.30, “Health Physics Surveys in Uranium Recovery Facilities”), the staff communicated this information to the first applicants for new ISR facilities during the technical review process, including face-to-face meetings. The public availability of these technical reviews, including NRC requests for additional information, in NRC’s Agency-wide Documents Access and Management System (ADAMS) should be beneficial to the preparation of complete applications by future applicants. Additionally, the staff is planning a 2-day workshop with the uranium recovery industry in late 2009 to discuss facility Health Physics Program issues and the overall preparation of license applications.

Concerns #5:

Another issue raised was the view that the NRC staff has altered its policy supporting risk-informed, performance-based licensing with respect to the staff’s need to review and approve all wellfield packages for newly licensed ISR facilities prior to the onset of uranium recovery operations in new wellfields.

Response:

The staff fully supports the concept of risk-informed, performance-based licensing for uranium recovery facilities as evidenced by the inclusion of a license condition in every facility license that allows licensees to implement changes, tests, and experiments without obtaining a license amendment if certain conditions are met. For ISR license applications, regional groundwater pumping tests are completed over large areas, leaving wellfield-specific pump testing to occur at a later time prior to operation. With this type of facility, adequate characterization of the site hydrogeologic features and the associated groundwater monitoring network is a key safety and environmental protection issue. Protection of water well users outside the uranium recovery zones and in aquifers above and below the recovery zones is a fundamental part of the regulation of these sites. Therefore, certain site-specific hydrogeologic features or land use activities (e.g., coal bed methane extraction) may necessitate the need for the staff review of individual wellfield packages prior to operation. This need will be determined on a site-specific basis. For the new license applications received to date, the staff has observed many complexities not encountered before in historic NRC-licensed ISR projects. Examples of such features or conditions would include sites with missing confining layers or faults within the ore zone and sites with aquifer characteristics and flow conditions that are not well understood. Therefore, for new ISR facility licensees with no demonstrated history of operational performance, the staff plans to establish a license condition requiring the submittal of wellfield packages for review and approval. This condition would reflect the importance of groundwater protection as one of the most significant safety and environmental issues at ISR facilities. Upon successful demonstration of operational performance, licensees may request removal of the license condition. We are aware of industry’s concern over potential delays in operation that this review may cause and will work with the relevant State Agencies to make the review process effective and efficient to avoid such delays. For efficiency purposes, licensees may submit multiple wellfield packages for review in advance of planned operations.

Concern #6:

The letter also cites the benefits of industry involvement in the evolution of the regulatory and policy aspects of NRC's Uranium Recovery Program.

Response:

The staff agrees with your assessment that the industry has both unique expertise and perspective to provide in supporting the effectiveness and efficiency of the Uranium Recovery Program. The NRC staff encourages a policy of communication and inclusion with the industry, other stakeholders, and Native American Tribes on licensing issues and evolution of the regulatory framework for the Uranium Recovery Program. This interest has been facilitated through regular workshops, such as the annual NMA/NRC Uranium Recovery Workshop, as well as through special meetings, such as the December 2008 workshop in Denver, Colorado, during which various licensing and radiation protection issues were discussed. Other notable interactions with the industry include a February 2007 workshop and a March 2007 meeting to discuss the licensing process for new applicants and the planned ISR rulemaking for groundwater protection, respectively. The enhancement of the Uranium Recovery Program regulatory framework is a public process where the industry and other stakeholders are encouraged to provide commentary and input. This approach was used to develop the GEIS for ISR facilities and RIS 2009-12 regarding site preparation activities at proposed, unlicensed uranium recovery facilities and will be used in the ongoing regulatory guide update program and the revision of NUREG-1569, where drafts of the aforementioned documents are, or will be, issued for public comment.

Concern #7:

Comments were made related to the adequacy of resources to support the Uranium Recovery Program.

Response:

The NRC has significantly increased support for the program over the past several years, commensurate with the expected submittal of new applications for uranium recovery facilities. Notwithstanding this increase, the adequacy of resources to support both licensing reviews and regulatory framework development remains challenging. The timely completion of licensing actions remains our highest priority. However, as resources are not presently adequate to fully support the parallel enhancement of the program regulatory framework (e.g., regulatory guide revisions), resources will be applied to this effort as available.

Concern #8:

Concern is expressed in the letter that NRC was not implementing its “first in, first out” policy for completing the reviews of license applications.

Response:

The staff’s safety and environmental reviews of the first license applications received, including Moore Ranch, were not well-aligned, primarily due to lack of staff and contractor support for initiating the environmental review. However, the staff has not altered its “first in, first out” policy for license application reviews and the staff still expects that, pending resolution of open safety issues, the Moore Ranch licensing review will be among the first completed. With appropriate resources now in place, future license application reviews will be aligned and the staff intends to meet its timeliness goals for acceptance reviews, issuance of RAIs, completion of the safety and environmental reviews, and overall completion of the licensing actions. Notwithstanding this intent, the ability to meet these goals is largely dependent on the quality of the license application, timeliness in responding to RAIs, and the resolution of outstanding safety and environmental issues. With respect to the Moore Ranch application, a significant number of technical issues remain to be resolved and, as such, the schedule for completion of this review is uncertain as the NRC has little control over the timeliness and quality of applicant responses to RAIs and the applicant’s responsiveness to resolution of issues.