



March 15, 2012

Mr. Doug Mandeville  
U.S. Nuclear Regulatory Commission  
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**Re: License # SUA-1548-Response to NRC Request for Decommissioning Schedule and Request for Exemption from the requirements of 10 CFR Part 40.42 as applied to groundwater restoration schedules**

Dear Mr. Mandeville:

In response to your letter dated February 8, 2012, and received by Cameco on February 14, 2012 Cameco is hereby requesting NRC Staff grant a specific exemption pursuant to 10 CFR Part 40.14(a) from the requirements of 10 CFR Part 40.42 as applied to alternate groundwater restoration schedules for Cameco's current and future wellfields. Under Part 40.14(a), the requirements for a specific exemption are:

*"(a) The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulation in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest."*

Upon a demonstration that these requirements are satisfied, NRC Staff may issue the requested exemption from 10 CFR Part 40.42 requirements for alternate groundwater restoration schedules.

Currently, NRC Staff's legal interpretation of Part 40.42's provisions requires that all ISR license applicants or licensees submit schedules demonstrating initiation, conduct and completion of groundwater restoration within a period not to exceed twenty-four (24) months. In the event that such a demonstration cannot be made, NRC Staff has required that ISR license applicants or licensees request approval of an alternate schedule showing how restoration will be completed and a projected timeframe upon which such an alternate schedule is based. However, while Cameco respectfully disagrees with NRC Staff's interpretation of the scope of Part 40.42 and, by this transmittal letter, requests that NRC Staff re-evaluate its legal interpretation of this regulation, because of that interpretation, it is necessary for Cameco to request the exemption noted above.

Given that a formal re-evaluation of this regulation in a Regulatory Issue Summary (RIS) and/or by subsequent amendment of such regulation would require considerable time and resources, Cameco hereby requests a Part 40.14(a) specific exemption from Part 40.42's requirements for alternate groundwater restoration schedules for all current and future wellfields under its Smith Ranch license. When Part 40.42's requirements were initially promulgated, NRC Staff determined that they applied to all fuel cycle facilities including conventional uranium mills. The American Mining Congress (AMC) (now the National Mining Association (NMA)) sought a revision to this regulation that would remove conventional uranium mills from its scope. AMC/NMA argued that Part 40.42 was inappropriately applied to such mills because its requirements could not be applied realistically to final closure of conventional uranium mill tailings impoundments. As discussed in AMC/NMA's lawsuit settlement negotiations with NRC

regarding Part 40.42, conventional uranium mill tailings impoundments are operated, managed, and reclaimed/stabilized over a timeframe and in a manner that effectively renders Part 40.42's 24 month decommissioning timeframe inapplicable. Conventional uranium mill tailings impoundments often exceeded 40 acres and contained significant amounts of fluid which could not be decommissioned and stabilized in a 24 month timeframe, particularly since such impoundments are required to reach ninety (90) percent compaction prior to applying the cover necessary to complete mandatory surface stabilization requirements. Thus, Part 40.42's application to conventional uranium mill tailings impoundments resulted in an unattainable goal. As a result of this lawsuit, AMC/NMA and NRC reached a settlement resulting in a revision to Part 40.42 in which conventional uranium mill tailings impoundments are exempted from its requirements.

Since NRC Staff has, as a practical matter, not yet considered the practicability of applying Part 40.42's requirements to ISR groundwater restoration, Cameco asserts that its request for a Part 40.14(a) specific exemption from Part 40.42 requirements for alternate groundwater restoration schedules is consistent with the impracticability determination made by NRC regarding conventional uranium mill tailings impoundments and satisfies Part 40.14(a)'s requirements for specific exemptions.

First, Part 40.42's requirement of imposing precise timeframes (i.e., 24 months) for groundwater restoration is not practicable in light of the fact that ISR operations and groundwater restoration occur in natural systems. Aquifers in which uranium is recovered are required to undergo groundwater restoration, but the conduct of such restoration is specifically tailored to the individual wellfield in the natural system in which the aquifer is located. Given the highly site-specific nature of aquifers and the fact that groundwater restoration is an iterative process, it is not practicable to assign a precise 24 month timeframe to restoration of *all* aquifers within which ISR operations occur at any given site -. Further, such a prescriptive requirement is inconsistent with the language of the Preamble to 10 CFR Part 40, Appendix A (which is specifically designed to address uranium recovery):

*"(i)n many cases, flexibility is provided in the criteria to allow achieving an optimum tailings disposal program on a site-specific basis....All site specific licensing decisions based on the criteria in this appendix or alternatives proposed by licensees or applicants will take into account the risk to the public health and safety and the environment with due consideration to the economic costs involved and any other factors the Commission determines to be appropriate."*

Thus, the imposition of such precise, prescriptive timeframes to groundwater restoration in aquifers that are part of natural systems is not practicable/reasonably achievable.

Second, like conventional uranium mill tailings impoundments which can vary greatly in size and disposal capacity, ISR wellfields also vary in size, number of wells, wellfield patterns, hydrological conditions, and as such, will vary in terms of the length of time necessary to complete groundwater restoration. Prior to installing a wellfield, an ISR operator is required to assess each of these factors as well as achievable pumping rates, concurrent uranium recovery and restoration operations, and potential impacts on groundwater consumption. But, it is well-understood that groundwater restoration and the assessment of each of these factors is a highly site (and wellfield) specific, iterative process based on data collection and analyses over the life of a given wellfield. Thus, a site-specific assessment of each of these factors will vary over time and, in many cases, shift the timeframe within which groundwater restoration can be achieved practicably. Therefore, to subject an ISR operator to Part 40.42's requirements for alternate schedules presumes that restoration not only can be practicably achieved in 24 months (which based on multiple previous requests for additional information (RAIs) to ISR licensees and license applicants is not considered practicable by NRC Staff) but also that the exact timeframe for restoration of any given wellfield can be known prior to operations. These assumptions are inconsistent with the current state of technology for ISR projects and, as such, demonstrate that Part 40.42's application to ISR groundwater restoration is inappropriate.

Cameco also would like to state its position that, since groundwater restoration is mandated by license condition prior to any recovery operations (and indeed mandated to begin in any given wellfield when production ceases which can result in concurrent recovery and restoration), it would appear that restoration is a "purpose" for which each wellfield is licensed. Accordingly, licensee efforts to restore

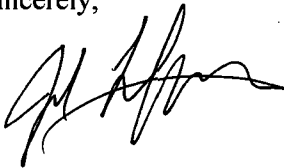
wellfields should not be considered to be a situation in which the licensee has “permanently cease[d] principal activities” nor should restoration be considered a principal activity that has not been conducted for twenty-four (24) months. This is particularly clear in the case of concurrent recovery and restoration at a licensed ISR site. Simply put, NRC Staff’s interpretation that restoration is not a “principal activity” under an NRC ISR license that presumes “phased” development of recovery, restoration, and final decommissioning and decontamination is not credible.

With that said, Cameco believes that its Part 40.14(a) specific exemption request comports with NRC requirements and, thus, should be granted. The main component of a specific exemption request is that the requested exemption must not “endanger life or property or the common defense and security.” Cameco’s requested specific exemption indeed satisfies this requirement as its issuance will not relieve Cameco of its responsibility to successfully complete groundwater restoration of all ISR wellfields at its licensed sites in accordance with 10 CFR Part 40, Appendix A, Criterion 5(B)(5) groundwater quality standards and in a manner that is as low as reasonably achievable (ALARA). In addition, it will not relieve Cameco of its responsibility to satisfy all applicable license conditions regarding groundwater quality, potential excursions, and groundwater restoration. Thus, given that NRC license conditions and all other NRC authorizations are deemed appropriate to adequately protect public health, safety, and the environment and that Cameco’s requested specific exemption will not alter any of these requirements, it is appropriate to determine that the requested specific exemption does not endanger life or property or the common defense and security.

The requested specific exemption is also authorized by law and is in the public interest. NRC regulations promulgated under the Atomic Energy Act of 1954, as amended, impose requirements on a licensee for groundwater restoration which will not be nullified in the event this specific exemption is granted. Thus, the AEA requirement for groundwater restoration is not superseded by this specific exemption and, therefore, is authorized by law. Further, the specific exemption is in the public interest because it will conserve valuable licensee and agency resources that would otherwise be spent reviewing alternate schedules and, in some cases, in otherwise costly license amendment proceedings.

Your attention to this matter is greatly appreciated and if you have any further comments or clarifications, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Josh Leftwich", written in a cursive style.

**Josh Leftwich**  
*Director of Safety, Health, Environmental, & Quality*

EC: CR- Smith Ranch-Highland