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United States Nuclear Regulatory Commission
Attn: Kristine Svinicki, Chairman
Mail Stop O-16 B33
Washington, DC 20555-0001

United States Nuclear Regulatory Commission
Attn: Annette L. Vietti-Cook, Secretary of
the Commission
Mail Stop O-16 B33
Washington, DC 20555-0001

Dear Chairman Svinicki:

In August of 2019, Western Uranium and Vanadium Corporation (Western) submitted a White Paper to the Commission for its consideration regarding a regulatory interpretation by the United States Nuclear Regulatory Commission (NRC) Staff, which was subsequently implemented by the State of Colorado's Agreement State program through its Department of Public Health and Environment (CDPHE), that use of the process known as "kinetic separation" for the purpose of creating uranium ores for milling at an Atomic Energy Act of 1954, as amended (hereinafter the "AEA") licensed uranium mill constitutes "uranium milling" under 10 CFR Part 40.4's definition of "uranium milling" and generates waste streams classified as 11e.(2) byproduct material as defined in Section 11(e)(2) of the AEA. Western's White Paper offered legal, regulatory, and policy argument for why this interpretation is incorrect ranging from past federal legal precedent, past NRC internal legal and regulatory interpretations, and process-specific comparisons to other mining, source material processing, and milling processes. The White Paper requested that the Commission review the arguments therein in a manner similar to its review of the National Mining Association's (NMA) 1998 White Paper that resulted in several Commission interpretations including the exercise of exclusive, federal preemptive regulatory authority over the radiological and non-radiological components of 11e.(2) byproduct material and that restoration fluids generated at *in situ* leach uranium recovery (ISR) facilities should be classified as 11e.(2) byproduct material. The White Paper also requested that the Commission classify "kinetic separation" as either mining, which is outside the scope of the Commission's AEA authority, or "source material processing" which requires a source material license and not a combined source and 11e.(2) byproduct material license.

In addition to this request, Western's White Paper also posed an alternative course that the Commission could follow to remedy the issues raised regarding "kinetic separation." This alternative course involves the inclusion of revised regulatory language amending the 10 CFR Part 40.4 definition of "uranium milling" to clearly delineate what activities fall into the categories of "mining," "source material processing," and "uranium milling." This recommended regulatory language would put "kinetic separation" in either the "mining" or "source material processing" categories and would remove it from the "uranium milling" category.

Typically, regulatory revisions must be accomplished pursuant to rulemaking process that requires thorough analysis of potential changes, draft regulatory revisions, notice and public comment and, Commission authorization to proceed with such changes. These processes require the use of agency resources and time to proceed through the required steps to produce a final rule. But, in this case, such a resource investment is not necessary.

However, at this time, the Commission has a regulatory vehicle that can be used to accomplish this goal. On January 2, 2020, NRC Staff submitted SECY-19-0123 entitled *Regulatory Options for Uranium In Situ Recovery Facilities* in which three (3) options are proposed for the Commission's consideration, Option 3 of which is to proceed with a targeted rulemaking aimed towards modernizing and updating its "uranium milling" regulations for ISR projects. This Option was recommended by NRC Staff and interested stakeholders are currently awaiting a decision from the Commission.

While the mission of this targeted rulemaking is to update and modernize 10 CFR Part 40 regulations to reflect ISR projects, the need for such a rulemaking is much broader in scope and is truly intended to accomplish a larger goal which is regulatory certainty and transparency, as well as ensuring that the Commission's regulations are harmonized with the evolution of uranium mining technology with an eye towards the true purpose of the AEA (protecting public health and safety and the environment in a risk-informed manner). After enactment of the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) to amend the AEA and to create a separate regulatory regime for uranium milling facilities, the next and only rulemaking conducted and finalized by the Commission with respect to "uranium milling" and its relationship with "mining" and "source material processing" was in the 1980s in an effort to implement UMTRCA's Congressional mandate. Since then, NRC Staff has regulated "mining," "source material processing," and "uranium milling" with a series of regulatory interpretations and one rulemaking tailored towards identifying activities that may require a source material license. Indeed, the plain language of the 10 CFR Part 40.4 definition of "uranium milling" is purely subjective as it defines the term as any activity that generates 11e.(2) byproduct material. Nowhere in the Commission's regulations is there a hard and fast delineation of what activities fall into these three categories. By clearly defining the scope and categorization of these activities, the Commission will go a long way towards effectively communicating to license applicants what types of licenses are required and the costs associated with investing in given technologies and projects. If the goal of this rulemaking is regulatory transparency, it must be

transparent for all types of interested stakeholders, including NRC and Agreement State license applicants and licensees.

Western believes that these objectives can be accomplished by directing NRC Staff to incorporate revisions to the 10 CFR Part 40.4 definition of “uranium milling” like those offered in its White Paper. By way of background, Western asserts that the use of “kinetic separation” processes to mine for uranium, without using chemicals or any form of intentional introduction of lixiviants or lixiviant-like material, constitutes nothing more than mining or source material processing. The revisions to this definition can be implemented quickly and clarified in the eventual draft rule’s Statement of Considerations by implementing the following regulatory language as offered in Western’s White Paper. This recommended revision involves two revisions, one of which has already been endorsed by the Commission through its alternate feed guidance decisions. As stated on Pages 89-90 of the White Paper:

“First, the Commission should consider adopting its approved definition of the term “ore” to provide further clarification on what materials may fall under the definition of 11.e(2) byproduct material and what materials qualify as “ore” and not necessarily as waste materials or source material uranium recovery products. The following is a recommended definition the Commission should consider:

Ore means any natural or native matter or any other matter from which source material (uranium and/or thorium) can be extracted at a licensed AEA uranium milling facility.

The recommended definition of “ore” is substantially similar, if not identical, to the definition offered in NRC Staff’s alternate feed guidance and as approved by the Commission in administrative litigation. Since the definition of “ore” is legally codified through the Commission’s decisions, adoption of this definition into 10 CFR Part 40.4 serves as a simple clarification of the Commission’s interpretation of the term “ore” as it appears in the AEA.

Then, to supplement the addition of the definition of “ore” and to further clarify the definition of “11.e(2) byproduct material,” Western suggests that the Commission consider an amendment to the definition of “uranium milling” to provide more detail as to the extent of NRC Staff’s discretion when interpreting what activities constitute “mining” or an AEA-regulatable activity such as “source material processing” or “uranium milling:”

Uranium Milling means any activity that results in the production of byproduct material as defined in this part. The term “uranium milling” is not intended to apply to activities in or at a uranium or other mineral mine including, but not limited to: (1) blasting including split-shooting; (2) high-grading; (3) ore sorting, high-grading, blending or separation; and (4) off-mill-site crushing, grinding, beneficiation or activities identified in (1-3).

These proposed revisions to “uranium milling” are meant to codify where NRC’s AEA jurisdiction over source material processes attaches and where activities associated with said processing crosses into the scope of “uranium milling.” There has been considerable confusion associated with where an almost forty (40) year old memorandum known as the Fonner memorandum explains where this line can be drawn and has resulted in some questionable regulatory interpretations by NRC Staff on company inquiries (i.e., the regulatory differences between “source material processing” and “uranium milling”). These revisions are intended to further clarify this jurisdictional line recognizing that NRC has resisted getting involved in activities closely associated with mining such as ore sorting, blending and other activities listed in the proposed revision, as well as ore pads at mine sites for future shipping of ores to a uranium milling facility. Given that NRC already has gone through a rulemaking for “source material processing” and a re-definition of “unimportant quantities” for source material possession, it would be to NRC’s benefit to clearly draw the aforementioned jurisdictional line in this manner. NRC’s historical actions show that it typically does not attempt to extend its regulatory authority to mining sites, even if ores had been removed from its place in nature. But, even if NRC were to extend this authority to certain mine-site-related activities, the concept of “uranium milling” should not be extended to such activities.”

While these regulatory revisions are not directly related to ISR project regulation, it is a further clarification of the definition of 11e.(2) byproduct material and can provide additional guidance to other types of licensees such as laboratories that are licensed to handle and test 11e.(2) byproduct material. It is necessary to utilize this regulatory vehicle to the maximum extent practicable as the last instance where the Commission engaged in such a rulemaking was more than thirty-five (35) years ago. Therefore, Western respectfully requests that the Commission consider including in its eventual Staff Requirements Memorandum to NRC Staff inclusion of the proposed regulatory language identified above and in Western’s White Paper or similar language reflecting the fact that the use of “kinetic separation” processes to mine uranium does not constitute “uranium milling” and is either “mining” or “source material processing.”

Western thanks the Commission for its consideration of Western's White Paper and the substance of this letter. Should you or the other members of the Commission have any questions regarding this letter or the White Paper, please do not hesitate to contact me at your convenience. Thank you for your time and consideration in this matter and Western looks forward to the Commission's final determination.

Respectfully Submitted:

A handwritten signature in black ink, appearing to be "C. Pugsley", written over a horizontal line.

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Date: January 28, 2020

CHAIRMAN Resource

From: Chris Pugsley <cpugsley@athompsonlaw.com>
Sent: Tuesday, January 28, 2020 10:53 AM
To: 'Office of the Secretary (secy@nrc.gov)'; CHAIRMAN Resource; CMRBARAN Resource; CMRCaputo Resource; CMRWright Resource; Pham, Bo; patricia.holihan@nrc.gov; Von Till, Bill
Cc: George Glasier; silverhawkranch@aol.com; Robert Klein; Anthony Thompson
Subject: [External_Sender] Letter Regarding SECY-19-0123
Attachments: lettertoCommissionSECY-19-0123.pdf

Dear Chairman Svinicki and Members of the Commission:

Please find attached Western Uranium and Vanadium Corporation's letter regarding SECY-19-0123. If you have any questions, please do not hesitate to contact me at the numbers below. Thank you and Happy New Year!

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