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May 26, 2005

United States Nuclear Regulatory Commission  
Attn: Mr. Robert Nelson  
Chief, Division of Uranium Processing  
Fuel Cycle Facilities Branch  
Mail Stop T8-A33  
Washington, DC 20555

Dear Mr. Nelson:

Pursuant to 10 CFR § 40.14(a), Western Nuclear, Inc. (WNI) hereby applies to the Nuclear Regulatory Commission (NRC) for a specific exemption from 10 CFR Part 40, Appendix A, Criterion 5's requirements to continue its active groundwater corrective action program (GWCAP) at its NRC-licensed Split Rock uranium processing facility located in Jeffrey City, Wyoming, pending a decision to grant its alternate concentration limit (ACL) application. Under Section 40.14(a), licensees subject to 10 CFR Part 40 regulations may be, "grant[ed] such exemptions from the requirements of the regulation in this part as it [the Commission] 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." Further, while not directly applicable to this specific exemption application, 10 CFR § 50.12(a)(2)(i-vi) prescribes additional requirements for exemptions demonstrating that the specific exemption request is justifiable, including the existence of special circumstances when one of the following conditions are met:

"(i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or

(ii) [a]pplication of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; or

(iii) [c]ompliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; or

(iv) [t]he exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; or

(v) [t]he exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or

(vi) [t]here is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption.

By this letter, WNI asserts that cessation of its active GWCAP is authorized by law, does not pose a significant threat to life or property or the common defense and security, is not achieving the purpose for which the underlying rule was promulgated, and is in the public interest. Further, due to the specific circumstances associated with this request, WNI hereby requests expedited review of the request by NRC Staff and the Commission so that, if granted, reclamation of its evaporation ponds may be effectuated this year.

#### I. BACKGROUND INFORMATION

With respect to the substance of its request and as discussed in several meetings with NRC Staff, WNI is requesting a Section 40.14(a) specific exemption to permit the cessation of the *active* GWCAP activities at its Split Rock site. By way of background on this request, on March 26, 1981, NRC incorporated into WNI's license the first environmental reporting requirements for groundwater (Amendment No. 1 to the December 4, 1980 renewed SUA-56). A groundwater detection monitoring plan was added the SUA-56 on May 6, 1985 (Amendment No. 25) though no site-specific background concentrations had been established. Background water quality standards and specific license standards for groundwater compliance were incorporated into SUA-56 on April 15, 1987 (Amendment No. 36). On May 15, 1987, WNI notified NRC that a statistically significant change in groundwater quality from background concentrations had been detected at the point of compliance (POC). Subsequently, WNI proposed a groundwater compliance monitoring program to delineate the concentrations and extent of relevant constituents of concern (COCs). This monitoring program and specific compliance standards were incorporated into SUA-56 on August 4, 1987 (Amendment No. 39).

WNI developed a GWCAP and, on April 8, 1988, submitted a plan for accelerated dewatering of tailings impoundment water and proposed ACLs. NRC approved WNI's proposed GWCAP for accelerated tailings dewatering but deferred review of the proposed ACLs until publication of NRC's ACL guidance in May of 1988. WNI submitted a revised GWCAP on August 31, 1989, and NRC incorporated this GWCAP into SUA-56 on September 29, 1989, as Amendment No. 51 (License Condition No. 74). This plan called for pumping water from wells beneath the tailings impoundment to lined evaporation ponds constructed in the Southwest Valley for treatment (i.e., evaporation in ponds with additional enhanced evaporation by misting water onto the surface of the tailings impoundment). Pumping of site groundwater commenced in the spring of 1990. After several revisions to the GWCAP, the NRC-mandated GWCAP currently requires

pumping and evaporation of six (6) to fifteen (15) million gallons of groundwater annually.

Comprehensive and detailed site studies on site groundwater conditions have been performed by WNI over a five (5) year period to fully characterize the Split Rock site's source terms, hydrological and geological conditions, and geochemical effects on constituent transport. In addition, potential corrective action alternatives for groundwater compliance were rigorously screened, and an "as low as reasonably achievable" (ALARA) evaluation was performed with respect to potential impacts to public health, safety, and the environment from each alternative. After several noticed public meetings in Jeffrey City, Wyoming, and noticed public comment periods, these alternatives were addressed, first in draft and, later, in final form, and, subsequently, were proposed to NRC for its approval in a formal site closure plan.

On October 29, 1999, WNI submitted the proposed site closure plan, including a Site Groundwater Characterization and Evaluation Report to NRC for its review and consideration. This proposal, which included proposed ACLs, concluded that the active GWCAP would not be able to restore site groundwater to the water quality standards in WNI's license. Specifically, Section 3.1 of the Report concludes that the existing *active* GWCAP has very little impact on site groundwater. Calculations indicate that GWCAP captures approximately five percent of the northwest valley seepage and nineteen (19) percent of the southwest valley seepage. Additionally, secondary source terms have been created in both the Northwest and Southwest valleys that are beyond the footprint of the reclaimed tailings impoundment. These secondary source terms which are the major source of contaminants in the groundwater migrating out of the Northwest and Southwest valleys are unaffected by the GWCAP pumping. Thus, *active* GWCAP pumping is not able to retrieve any of the contaminated groundwater that has migrated past the mouths of the valleys. Groundwater monitoring data confirm the conclusion that the existing *active* GWCAP is doing little, if anything, to improve site groundwater quality.

Finally, since there are no appreciable beneficial impacts on site groundwater from the ongoing *active* GWCAP, the costs, in terms of financial resources and man-hours, expended by WNI are unreasonable.

In a letter dated January 7, 2000, NRC acknowledged that groundwater pumping associated with the current GWCAP is "inadequate to restore groundwater" to the standards set forth in WNI's license. But, even in the face of this statement, NRC Staff stated that cessation of the active GWCAP, without formal approval of WNI's ACL application, would result in a violation of 10 CFR Part 40, Appendix A Criteria and WNI's NRC license. As a result, a specific exemption that will not set a general precedent for other uranium mill tailings sites is necessary to rectify this highly site-specific scenario.

## II. WNI'S SPECIFIC EXEMPTION APPLICATION MEETS APPLICABLE NRC REQUIREMENTS

### A. WNI'S SPECIFIC EXEMPTION IS AUTHORIZED BY LAW

Initially, WNI's specific exemption request is authorized by applicable law. As discussed above, 10 CFR § 40.14(a) specifically authorizes exemptions from 10 CFR Part 40 requirements, including Appendix A criteria, pursuant to the standard delineated above. Further, 10 CFR § 50.12(a)(2)(i-vi) provides persuasive authority on a standard for specific exemptions by augmenting 10 CFR § 40.14(a)'s requirements to include the presence of "special circumstances." As will be shown below, WNI meets each of 10 CFR § 40.14(a)'s requirements, as well as 10 CFR § 50.12(a)(2)(ii) "special circumstances" requirement.

### B. WNI'S SPECIFIC EXEMPTION REQUEST DOES NOT ENDANGER PUBLIC HEALTH AND SAFETY OR THE COMMON DEFENSE AND SECURITY

Second, WNI's specific exemption does not endanger public health and safety or the common defense. WNI has presented a groundwater model, which has been accepted by NRC Staff, in conjunction with its long-term site closure plan, demonstrating that the site plume containing 11c.(2) byproduct material will not reach any properties in the so-called Red Mule area for at least 500-600 years, consistent with NRC's 10 CFR Part 40, Appendix A Criteria for final site closure and long-term surveillance and monitoring. Cessation of the active GWCAP will not result in any new site conditions that would accelerate the flow of the plume to Red Mule or other properties within the long-term site closure boundary. Thus, while the *active* GWCAP is recognized by NRC Staff as doing nothing to improve site groundwater quality, cessation of the *active* GWCAP *will not increase* the potential for significant impacts on public health and safety or the environment.

### C. WNI'S SPECIFIC EXEMPTION REQUEST IS IN THE PUBLIC INTEREST

Third, WNI's specific exemption request is in the public interest. By permitting WNI to cease *active* GWCAP activities, WNI will be able to complete reclamation of its evaporation ponds, which is the final "on-the-ground" stabilization activity necessary for license termination and transfer of the site to DOE for long-term surveillance and monitoring.

In addition, continuation of the *active* GWCAP will result in the unnecessary expenditure of licensee resources (i.e., financial resources and manpower) on an activity that provides no benefit. Failure to grant this specific exemption *in an expedited manner* will delay reclamation of site evaporation ponds and final site closure for several seasons due to the variables involved in annual construction seasons (e.g., weather conditions). This delay would result in nothing more than the unnecessary expenditure of licensee

resources while achieving no actual benefit. Further, continuation of the *active* GWCAP and the resulting delay from such action will result in the unnecessary expenditure of taxpayer financial resources due to the federal government's continued reimbursement of WNI expenditures as part of the Title X program. Therefore, based on the discussion above, the grant of WNI's specific exemption is in the public interest.

**D. WNI'S SITE-SPECIFIC CONDITIONS REPRESENT SPECIAL CIRCUMSTANCES CONSISTENT WITH 10 CFR § 50.12(a)(2)(ii)**

Finally, while not directly applicable to 10 CFR Part 40 licensees, 10 CFR § 50.12(a)(2)(ii)'s specific exemption requirements provide persuasive authority upon which NRC Staff may rely when reviewing WNI's specific exemption request. As stated above, Section 50.12(a)(2)(ii)'s requirements provide one more specific requirements for such exemptions above and beyond that of 10 CFR § 40.14(a): that specific exemptions may be granted when special circumstances exist. Based on section 50.12(a)(2)(ii)'s express language, special circumstances exist when "[a]pplication of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule."

WNI's specific exemption request meets the standard for "special circumstances." The purpose of 10 CFR Part 40, Appendix A, Criterion 5's requirements is to restore groundwater quality at uranium milling sites to appropriate standards. These requirements also require that such GWCAP be continued until such standard is met. In WNI's case, the active GWCAP was approved by NRC with the expectation that it would return site groundwater quality to license standards for the site. However, as discussed above and confirmed by NRC Staff's January 7, 2000, acknowledgement, WNI's active GWCAP is doing little, if anything, to improve site groundwater quality. Thus, it is apparent that Appendix A, Criterion 5's requirements, as reflected in WNI's active GWCAP cannot and will not achieve the purpose for which it was promulgated (i.e., restoring site groundwater to applicable standards). Therefore, WNI's specific exemption request fulfills applicable 10 CFR § 40.14(a) requirements and, as a result, should be granted.

**III. CONCLUSION: EXPEDITED REVIEW**

In addition to the discussion above, WNI is requesting expedited review of this specific exemption request. As NRC Staff is well-aware, operation of the active GWCAP requires the pumping of six to fifteen million gallons of water this year which must be evaporated pursuant to license condition. In order to comply with this license condition for 2005, WNI must begin pumping such water sometime this summer for evaporation to occur and must allow for such evaporation and drying of saturated materials before reclamation of the evaporation ponds may commence. Thus, approval of this specific exemption request prior to the necessary 2005 start-up date of GWCAP pumping would save licensee resources and would allow license termination to be effectuated more quickly. Therefore, WNI respectfully requests that its specific exemption request be reviewed and a decision be reached by June 30, 2005.

Please do not hesitate to contact me if you have any questions or concerns regarding this specific exemption application. Thank you.

Respectfully Submitted,



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