WESTERN NUCLEAR, INC.

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Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20852

Re: Western Nuclear Inc., Split Rock Uranium Mill Tailings Facility, Source Materials License SUA-56, Proposed Amendments to License Condition 74.

Dear Mr. Chang:

On October 29, 1999, Western Nuclear Inc. submitted a Site Closure Plan which included a comprehensive groundwater evaluation and a request to change the groundwater monitoring and compliance standards for the Split Rock Uranium Mill Tailings Facility. The initial request was supplemented by numerous submittals, meetings and telephone conversations. Based on the information submitted, NRC prepared and published an Environmental Assessment for Groundwater Alternative Concentration Limits for the site on August 29, 2006. License Amendment 99 was issued on September 28, 2006 which incorporated changes evaluated in the Environmental Assessment for groundwater monitoring and compliance standards at the site. Groundwater monitoring and compliance requirements are included in License Condition 74.

This letter proposes additional changes to License Condition 74 to update the license to reflect current conditions and to request changes to the selenium standard.

To best describe the proposed changes to the license and the rationale for the change, each existing requirement from License Condition 74 is presented followed by the proposed changes to the license. Supporting discussion for each proposed change is also presented.

74. The licensee shall implement a compliance monitoring program containing the following:

A. Sample wells JJ-1R, WN-39B, WN-41B, WN-42A, SWAB-1, SWAB-2, SWAB-4, SWAB-12, SWAB-22, SWAB-29, SWAB-31, and SWAB-32 semi-annually for uranium and sulfate and annually for aluminum, ammonia, antimony, arsenic, beryllium, cadmium, chloride, fluoride, lead, manganese, molybdenum, nickel, nitrate, pH, radium-226 and-228, selenium, sulfate, thallium, thorium-230,TDS, and uranium. Sample wells 1, 4R, 5, and 21 semi-annually for aluminum, ammonia, antimony, arsenic, beryllium, cadmium, chloride, fluoride, lead, manganese, molybdenum, nickel, nitrate, pH, radium-226 and-228, selenium, sulfate, thallium, thorium-230, TDS, and uranium. In addition, water levels shall be collected at all of the above wells for every sampling event.

No changes are proposed for this condition.

B. Comply with the following ground-water protection standards at point of compliance Wells 5 and 21, with background being recognized in Well 15:
beryllium = 0.05 mg/L, cadmium = 0.01 mg/L, chromium = 0.05 mg/L, lead = 0.05 mg/L, nickel =0.05 mg/L, selenium = 0.013 mg/L, and thorium-230 = 0.95 pCi/L.

Two changes to this condition are proposed. First, it is proposed that the limit for chromium be deleted. License Condition 74A does not require that chromium be analyzed. Since there are no analytical results for chromium, a standard for chromium is not relevant.

It is also proposed that the standard for selenium be changed from 0.013 mg/l to 0.05 mg/l. The current US Environmental Protection Agency (EPA) maximum contaminant level (MCL) for selenium is 0.05 mg/l (see http://www.epa.gov/safewater/contaminants/index.html). It was originally proposed in the October 1999 Site Closure Plan that the compliance limit for selenium be set at 0.05 mg/l. That request is reiterated now.

It is recognized that the current EPA MCL for selenium is greater than the Maximum Values for Ground-Water Protection listed in Table 5C of Appendix A of 10 CFR 40. It appears that the values in Table 5C are out of date and it is understood that the NRC is in the process of updating these standards. Nevertheless, recent discussions with NRC staff have indicated that the NRC position is that the standards listed in Table 5C of Appendix A to 10 CFR 40 supersede the current EPA MCLs at uranium mill tailings sites. The current EPA MCL for selenium is 0.05 mg/l while the limit listed in Table 5C is 0.01 mg/l.

It has been suggested that the appropriate framework for setting the selenium standard at the current EPA MCL is to request an ACL for selenium at the EPA MCL. Regardless of the category for the standard, setting the limit for selenium at the current EPA MCL of 0.05 mg/l will be protective as the EPA has determine this level to be protective. Since the EPA has determined that groundwater with selenium concentrations of 0.05 mg/l is safe for drinking water, any additional analyses beyond that supplied in the October 1999 Closure Plan to support a standard of 0.05 mg/l selenium is not warranted.

Groundwater monitoring indicates that selenium concentrations at POC well 5 is greater than the Table 5C limit of 0.01 mg/l but less than the EPA MCL of 0.05 mg/l. The current values are approximately 0.02 mg/l. The other POC well (well 21) has concentrations less than 0.01 mg/l. Groundwater modeling indicates that concentrations will continue to decline over time and therefore it is anticipated that future concentrations for selenium will remain less than 0.05 mg/l in POC well 5. Therefore, it is not anticipated that concentrations measured at the POC wells will exceed the proposed standard for selenium.

Concern has been raised about the concentration of selenium in well WN 42A which is a monitoring well down-gradient from POC well 5. Values in WN 42A have been as high as 0.042 mg/l. Recent samples taken in April 21, 2008 had a selenium concentration of 0.028 mg/l. Given the recent sample value it is believed that well WN 42A and all other wells will continue to have selenium values less than the proposed standard of 0.05 mg/l.

C. Comply with the following alternate concentration limits in the northwest valley at point of compliance Well 5, with background being recognized in Well 15:
ammonia = 0.61 mg/L, manganese = 225 mg/L, molybdenum = 0.66 mg/L, nitrate = 317 mg/L, radium-226 and -228 = 7.2 pCi/L, and natural uranium = 4.8 mg/L.
Comply with the following alternate concentration limits in the southwest valley at point of compliance Well 21, with background being recognized in Well 15:
ammonia = 0.84 mg/L, manganese = 35 mg/L, molybdenum = 0.22 mg/L, nitrate = 70.7 mg/L, radium-226 and -228 = 19.9 pCi/L, and natural uranium = 3.4 mg/L. [Applicable Amendments: 25, 27, 36, 39, 40, 44, 48, 51, 56, 58, 61, 62, 67, 69A, 79, 89, 98, 99]

No changes to this license condition are proposed.

D. Comply with the following ground water trigger levels at the point of exposure:
Trigger Levels for the Split Rock aquifer: ammonia = 0.5 mg/l, manganese = 0.73 mg/L, molybdenum = 0.18 mg/L, nitrate = 10 mg/L, radium-226 and -228 = 5.0 pCi/L, and natural uranium = 0.03 mg/L or 0.3 for SWAB-32.
Trigger Levels for floodplain aquifer: ammonia = 0.5 mg/L, manganese = 2.39 mg/L, molybdenum = 0.18 mg/L, nitrate = 10 mg/L, radium-226 and -228 = 5.0 pCi/L, and natural uranium = 0.03 mg/L.

It is proposed that this license condition be changed by increasing the natural uranium trigger level values. The trigger levels for uranium should be consistent with background concentrations. The current trigger limit for uranium is set at the EPA MCL for uranium at 0.03 mg/l (except for well SWAB-32 which has been shown to have naturally occurring uranium at concentrations greater than the rest of the site). Site wide background values for uranium in the Split Rock Aquifer is 0.13 mg/l and 0.044 mg/l for the Floodplain Aquifer as documented in Table 3 of the 2006 NRC Environmental Assessment and Table 17 of the October 29, 1999 Site Closure Plan. Since trigger levels are intended to determine when conditions differ from background, the trigger levels for uranium should be set at background levels, not at the EPA MCL which is significantly lower than site background or the alternative concentration limits set in license condition 74C.

E. Comply with the following surface water trigger levels at the point of exposure: ammonia = 0.5 mg/L, manganese = 0.05 mg/L, molybdenum = 0.18 mg/L, nitrate = 10 mg/L, radium-226 and -228 = 5.0 pCi/L, and natural uranium = 0.03 mg/L.

No changes to this license condition are proposed.

F. The licensee shall submit by December 15 of each year, a review of the corrective action program and its effect on the aquifer.
[Applicable Amendments: 25, 27, 36, 39, 40, 44, 48, 51, 56, 58, 61, 62, 67, 69A, 79, 99]

The corrective action program was discontinued in 2006. Therefore this license condition should be deleted.

G. The licensee shall repair all erosion protection thin spots on the groundwater corrective action ponds cover and the area between the corrective action ponds and the reclaimed tailings impoundment.

Previous correspondence and a site visit by NRC staff indicate that the appropriate repair has been completed. This license condition should therefore be deleted.

Please contact me if you have any questions or need clarification.

We appreciate your timely review of this request as we are committed to resolving the remaining few issues before license termination.

Sincerely

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Lawrence J. Corte
President
Western Nuclear, Inc.