Uranium Watch
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Via electronic mail

May 10, 2010

Mr. Dane Finerfrock, Director
Utah Division of Environmental Quality
Division of Radiation Control
P.O. Box 144850
Salt Lake City, Utah 84114-4850

RE: Comments on White Mesa Uranium Mill: Modification to the Groundwater Discharge Permit No. UGW37004 and Amendment 4 to Radioactive Materials License No. UT1900479.

Dear Mr. Finerfrock:

The proposed License Amendment 4 to Radioactive Materials License No. UT1900479 is for the construction of a new tailings impoundment at the White Mesa Uranium Mill, owned and operated by Denison Mines (USA) Corporation (DUSA, or Applicant). Below are comments on the license amendment and the Safety Evaluation Report: Review of License Amendment Request and Environmental Report for Cell 4B.

1. WHITE MESA ARCHAEOLOGICAL RESOURCES

1.1. The construction of Cell 4B will impact a number of Archeological Resources at the Mill site and in the White Mesa Archaeological District. White Mesa is in an area adjacent to and in the vicinity of extensive tribal holdings and an area rich in archaeological resources, which have been designated as significant and deserving of preservation. Many Archaeological Resources on White Mesa have been found eligible for the National Register, including resources that will be or have been impacted by activities associated with the proposed license amendment.

The Licensee and the Utah Division of Radiation Control (DRC) have not complied with the requirements of License Condition 9.7, which states, in pertinent part:

> All disturbances associated with the proposed development will be completed in compliance with the National Historic Preservation Act (as amended) and its implementing regulations, and the Archaeological Resources Protection Act (as amended) and its implementing regulations.

Compliance with the National Historic Preservation Act includes compliance with Section 106. The Safety Evaluation Report (SER) fails to discuss how the Applicant fulfilled its responsibilities under the "National Historic Preservation Act (as amended) and its implementing regulations, and the Archaeological Resources Protection Act (as amended) and its implementing regulations."

A contractor to the licensee has commenced excavation of the Archaeological Resources at the Mill, with approval of the DRC. However, excavation has commenced without the any Section 106 consultation. The excavation of the valuable Archeological Resource on White Mesa has taken place without informing and consulting with nearby tribal governments and tribal Historic Preservation Officers and without an opportunity for public comment.

Further, the Licensee commenced activities that have impacts on the Archaeological Resources and are the subject of License Condition 9.7 requirements prior to this comment period and prior to the issuance of the license amendment and final environmental evaluation.

All activities that impact Archaeological Resources at the Mill should cease until DRC initiates and completes a Section 106 consultation process, including consultation with affected tribal governments or appropriate tribal representatives. The DRC should not issue the license amendment without consulting with the Ute, Navajo, and other regional tribal Historic Preservation Officers regarding the destruction of irreplaceable historic resources.

Further, the SER must include a discussion of how the Applicant has complied with the provisions of License Condition 9.7.

1.2. LICENSE CONDITION 9.7.

The DRC is not proposing any changes to License Condition 9.7, which pertains to the cultural resources at the Mill. License Condition 9.7 refers to a Memorandum of Agreement (MOU) between the Utah State Historical Preservation Officer (SHAPO), the Advisory Council on Historic Preservation (ACHP) the Nuclear Regulatory Commission (NRC), and Energy Fuels Nuclear, Inc. (a former Mill owner/licensee). The MOU was ratified on August 20, 1979, and amended on May 3, 1983. The MOU should be amended or replaced, since it does not reflect the current situation at the Mill.

2. SAFETY EVALUATION REPORT (SER)

2.1. LICENSEE REPORTING RESPONSIBILITIES (SER, page 21).

The DRC should make the effluent monitoring reports, Semi-Annual Effluent Reports and Quarterly Groundwater Monitoring Reports and any additional effluent monitoring information submitted by the licensee pursuant to License Condition 11.2 available on

the DRC website in a timely manner.

2.3. LONG TERM IMPACTS

UCA R313-24-3D: Environmental Analysis – Long Term Impacts, Safety Evaluation, states that, pursuant to UAC R313-24-3, a major license amendment should include "consideration of the long-term impacts." The SER discussion addresses long-term impacts. However, the SER and the UCA section do not define long-term and leave the issue of long-term containment of the mill tailings and their associated emissions to be addressed in a future Reclamation Plan. Under current federal regulation (40 C.F.R. Sec. 192.32(B)(1)(i)[1]), consideration of the technical requirements for long-term containment of the tailings is limited to "one thousand years, to the extent reasonably achievable, and, in any case, for at least 200 years." The SER (page 30) gives states that Cell 4B has been designed to provide "reasonable assurance that radiological hazards will be suitably controlled for 1,000 years, to the extent reasonably achievable, and in any case for at lease 200 years."

So, we have "reasonable assurance" to the extent that suitable control is "reasonably achievable." What does this vague language mean over the long-term? The public, the licensee, and the DRC do not really know.

The tailings will remain on White Mesa in perpetuity, that is, forever. Therefore impacts from 200 to 1,000 years are short-term impacts, not long-term impacts, given the time that the tailings will continue to release radon and will be a radioactive and hazardous material requiring physical and regulatory control for as long as there are individuals and entities capable of exercising that control.

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[1] 40 CFR Sec. 192.32(B)(1)(i).
(1) Disposal areas shall each comply with the closure performance standard in Sec. 264.111 of this chapter with respect to nonradiological hazards and shall be designed to provide reasonable assurance of control of radiological hazards to (i) Be effective for one thousand years, to the extent reasonably achievable, and, in any case, for at least 200 years, and, (ii) Limit releases of radon-222 from uranium byproduct materials to the atmosphere so as to not exceed an average \2\ release rate of 20 picocuries per square meter per second (pCi/m2s).

\2\ This average shall apply to the entire surface of each disposal area over periods of at least one year, but short compared to 100 years. Radon will come from both uranium byproduct materials and from covering materials. Radon emissions from covering materials should be estimated as part of developing a closure plan for each site. The standard, however, applies only to emissions from uranium byproduct materials to the atmosphere.

Eventually the liners will break down, eventually the tailings cover will erode, and eventually the tailings and the associated radioactive and non-radioactive contaminants will disperse into the air, water, and soils.

Any evaluation of the long-term impacts of the proposed licensing action must address the potential impacts of the dispersion of the tailings from natural forces over the thousands and millions of years that the tailings will remain in place.

2.4. PERMANENT ISOLATION WITHOUT ONGOING MAINTENANCE (SER, page 24)

10 CFR Part 40, Appendix A, Criterion 1, states that tailings should be disposed of in a manner that no active maintenance is required to preserve conditions of the site.

There is no doubt that over the years, active maintenance will be required to preserve conditions of the site. The Department of Energy (DOE) has already discovered that active maintenance is required at some of the uranium mill sites that have been reclaimed and that DOE have responsibility for, due to erosion. The DOE is actively looking at different cover and tailings design systems because of the problems they have encountered at these sites.

No matter what the design is, eventually the cover, tailings, and White Mesa itself, will erode, as demonstrated by the geological landscape in the region. Any claim to continued long-term isolation of the tailings--without active maintenance--via a man-made design is not supportable.

The DRC should consult with the DOE and the Nuclear Regulatory Commission and take into consideration recent studies and data regarding the effectiveness of tailings system designs and materials to update the final cover design and materials requirements in order to achieve the maximum long-term isolation of the tailings with minimal maintenance. The DRC should not mislead the public and licensee into thinking that isolation of the tailings for 1,000 and for the long-term future can take place without active maintenance.

2.5. IMPACTS OF DEWATERING OF THE TAILINGS CELL (SER, pages 25 – 26)

The discussion of the permanent isolation without ongoing maintenance (10 CFR Part 40, Appendix A, Criterion 1) and the Reclamation Plan refer to the dewatering of the tailings cell after the operational life of the cell. However, there is minimal discussion about two of the primary problems encountered at uranium mills once operation has ceased and cell dewatering commences. Once dewatering commences, the result is an increase in the release of radon from the cell and an increase in windblown tailings. The SER mentions the possibility of the use of "platform fill," but provides little information and analysis of the use of fill or other means to minimize the emission of radon, hazardous and radioactive particulates to the atmosphere and the environment.

The SER should discuss in more detail the impacts of cell dewatering on the emission of radon and other gases and hazardous and radioactive particulates and how these impacts will be mitigated during the estimated 5.5 years between the cessation of cell operation and the placement of an interim and final cover.

2.6. OFF SITE MEASURING DEVICES

The February 12, 2010, letter to Dave Frydenlund, DUSA, from Senes Consultants Ltd., states (page 2): Due to the inaccuracy of the radon measurement devices the mill is not required to sample for environmental radon under its license."

The Application for Cell 4B and the SER fail to provide supportive documentation regarding various types of radon measuring devices and their supposed “inaccuracy” to justify the failure to measure environmental radon from Cell 4 B and other radon sources at the Mill. This would include on- and off-site monitoring of radon.

The SER should include a full justification, with supporting documentation, of the on- and off-site radionuclide monitoring programs, including monitoring of radon. If DUSA is not required to sample for environmental radon and other radioactive releases on- and off-site, the public must know why and have supporting technical bases.

2.7. EFFLUENT CONTROL DURING OPERATIONS (SER, pages 59 - 60)

The SER discusses compliance with 10 C.F.R. 40, Appendix A, Criterion 8, with respect radioactive effluents from the mill and tailings impoundment. Criterion 8 includes the requirement:

> Milling operations producing or involving thorium byproduct material must be conducted in such a manner as to provide reasonable assurance that the annual dose equivalent does not exceed 25 millirems to the whole body, 75 millirems to the thyroid, and 25 millirems to any other organ of any member of the public as a result of exposures to the planned discharge of radioactive materials, radon-220 and its daughters excepted, to the general environment.

The SER fails to discuss how compliance with the above requirement for exposures to the public will be measured and compliance will be assured with respect the release of the discharge of radioactive materials from Cell 4B and other sources at the mill during the operation of the tailings cell.

The SER should explain exactly how the Applicant will demonstrate compliance with Criterion 8 with respect the emission from Cell 4B.

2.8. COMPLIANCE WITH OTHER FEDERAL AND STATE REGULATIONS

The SER does not discuss required compliance with other state and federal regulations prior to the commencement of construction of Cell 4 B. This would include compliance with the requirements of 40 C.F.R. Part 61, Subpart A. Section 61.07 requires that DUSA submit an application to the Utah Division of Air Quality (DAQ) for Cell 4B as a new 40 C.F.R. Part 61, Subpart W regulated source and receive an approval from the DAQ, pursuant to Section 61.08. Recently, DUSA was issued a Notice of Violation by the Environmental Protection Agency for failure to comply with the Subpart A application/approval process for the Arizona 1 uranium mine. Therefore, the DRC should remind DUSA of their Part 61 responsibilities. Additionally, DUSA may be required to amend their air quality permit for the non-radioactive emissions from the uranium mill.

The White Mesa license should contain a condition that states that DUSA must comply with all applicable federal and state regulations and statutes and a license condition that states that DUSA cannot commence construction of Cell 4B until DUSA receives the required approval as a new 40 C.F.R. Subpart W regulated source from the DAQ.

Thank you for the opportunity to comment.

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