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Standard Review Plan for Conventional Uranium Mill Heap Leach Facilities

Comment On: NRC-2014-0178-0005

Standard Review Plan for Conventional Uranium Mills and Heap Leach Facilities; Reopening of Public Comment Period

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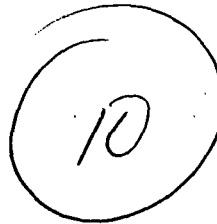
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79 FR 75397

General Comment

Please see the attached file.

Attachments

Comments_RRBA

SUNSI Review Complete

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Add= D. J. Manderville

(DTM2)

Ms. Annette Vietti-Cook
Secretary
Nuclear Regulatory Commission
Re: Docket ID NRC-2014-0178

Dear Ms. Vietti-Cook:

On behalf of the Roanoke River Basin Association (RRBA), I respectfully submit these comments on the Standard Review Plan for Conventional Uranium Mills and Heap Leach Facilities. RRBA is a 70-year old non-profit organization whose mission is to establish and carry out a strategy for the development, use, preservation and enhancement of the resources of the entire Roanoke River system of lakes and streams in the best interest of present and future generations. RRBA consists of hundreds of members, primarily located within the 410 mile-long basin in Virginia and North Carolina, including local governments; non-profit, civic, and community organizations, regional government entities; businesses and individuals.

In 2007, Virginia Uranium Inc. (VUI) proposed the first on the East Coast uranium mine and processing plant in the Roanoke River basin watershed. The uranium mine, processing plant and the associated radioactive waste storage facilities may negatively impact the Roanoke's water resources and our communities. Although the Commonwealth of Virginia currently does not allow uranium mining, development of the state's uranium deposits and construction of uranium processing plants and radioactive waste storage facilities remain a possibility in future. For this reason, RRBA requests that you consider the following factors that are o unique to Virginia when reviewing a permit for a uranium processing plant in Virginia.

Historically, U.S. uranium mining and processing occurred in desert or semidesert, sparsely-populated regions. Unlike the arid West of the United States, Virginia's climate is wet, with annual precipitation equal to about 42 inches; and the density of the population even in remote rural areas is significantly greater. In December 2011, the National Academy of Sciences released a report "Uranium Mining in Virginia: Scientific, Technical, Environmental, Human Health and Safety, and Regulatory Aspects of Uranium, Mining and Processing in Virginia. The NAS report has addressed in depth a multitude of issues related to uranium processing and challenges associated with storing the radioactive waste for the infinite amount of time in the area prone to extreme natural events. The NAS report concluded that extreme natural events would need to be taken into account when evaluating any particular site's suitability processing operations.

The NAS report describes Virginia's climate and the risks it poses as follows:

""Virginia has a positive water balance (a wet climate with medium to high rainfall), and is subject to extreme precipitation events associated with convection, frontal activity, tropical storms, and hurricanes, with the potential to result in record flood discharges, debris flows and avalanches, landslides, extensive property damage, and loss of life. In addition, parts of Virginia do have some seismic risk, and the state experienced a 5.8 magnitude earthquake in 2011. Although very difficult to accurately forecast, the risks and hazards associated with extreme natural events would need to be taken into account when evaluating any particular site's suitability for uranium mining and processing operations." P. 42

"Extreme natural events (e.g., hurricanes, earthquakes, intense rainfall events, drought) have the potential to lead to the release of contaminants if facilities are not designed and constructed to withstand such an event, or fail to perform as designed. " P. 5.

"Models and comprehensive site characterization are important for estimating the environmental effects of a specific uranium mine and processing facility. A thorough site characterization, supplemented by air quality and hydrological modeling, is essential for estimating the potential environmental impacts of uranium mining and processing under site-specific conditions and mitigation practices." P. 146

"Moreover, in a hydrologically active environment such as Virginia, with relatively frequent tropical and convective storms producing intense rainfall, it is questionable whether currently-engineered tailings repositories could be expected to prevent erosion and surface and groundwater contamination for 1,000 years." P. 153.

"If a major failure of waste containment facilities occurs, due either to extreme natural events or inadequate design, construction, or maintenance of such facilities, the potential long-term environmental effects are likely to be more than trivial. Temporary storage of mill tailings can pose greater short-term environmental risks, unless these facilities are also designed and constructed to contain the waste and treat all effluent under extreme climatic variability." P 155

"Because almost all uranium mining and processing to date has taken place in parts of the United States that have a negative water balance (dry climates with low rainfall) federal agencies have limited experience applying laws and regulations in positive water balance (wet climates with mediate to high rainfall) situations." P. 179

The potential impacts of uranium mining and processing were also thoroughly investigated by the City of Virginia Beach that supplies drinking water to over 700,000 people in the region, including the U.S. military bases in Hamptons Roads. The City of Virginia Beach study investigated the potential impacts of a uranium tailings release on downstream water sources. Specifically, the City focused on the potential of a catastrophic failure of a uranium mill tailings containment structure and subsequent discharge of uranium tailings into the Banister or Roanoke Rivers and the resulting radioactive contamination in downstream water bodies including the Kerr Reservoir and Lake Gaston. The study aimed to estimate the amount of uranium-contaminated sediment and water that might reach Kerr Reservoir under normal and extreme precipitation events, and estimate the potential increase in radioactivity levels and other contaminants in Kerr Reservoir and Lake Gaston. The study showed that radiological contaminants (radium-226 and thorium-230) in the water column and sediments in Banister and Roanoke Rivers and the Kerr Reservoir could result in water column concentrations exceeding by 10-20 times the regulatory standards for combined radium-226 and 228 in drinking water. The study also predicted that particulate contaminants in sediments would be re-suspended during high flows and that Kerr Reservoir would serve as a permanent trap for particulate contaminants. The study concluded that in the event of a partial failure of a uranium mill tailings containment, the City would have to shut off water supply from Lake Gaston for up to 1.5 years. The City's full report and video simulations are available at <http://www.vbgov.com/government/departments/public-utilities/pages/uranium-mining.aspx>

Additionally, RRBA has the concern about the accuracy of the data being submitted as part of the permit application. These data should be tested and thoroughly checked for accuracy. All the site data are produced by the companies with a financial interest in ensuring that the permit is issued. The uranium mining industry's track record in this country and throughout the world demonstrates that the industry's predictions in regard to potential impacts on water resources and public health, have proven to be overly optimistic and incorrect (i.e. the Midnight and Schwartzwalder Mines; the Uravan and Cotter Mills). All of these sites have generated "unforeseen" remediation, water treatment and litigation costs that have been borne largely by the public. Thus, taxpayers have subsidized the real costs for uranium mining and milling.

The RRBA requests that the NRC pays very close attention to the risks and potential impacts associated with the climate and hydrology in Virginia.

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