

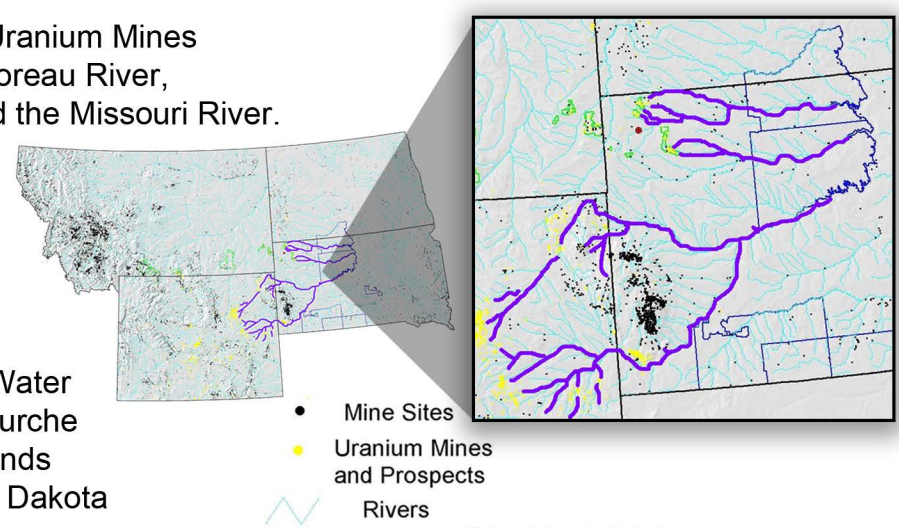
# ABANDONED URANIUM MINES FACT SHEET: SOUTH DAKOTA



*Warning sign at Riley Pass Uranium Mine in NW South Dakota.*

## There are 272 Abandoned Uranium Mines and Prospects in South Dakota.<sup>1</sup>

- The northwestern corner of South Dakota near Buffalo contains 103 Abandoned Uranium Mines and Prospects with some emitting four times as much radiation as in evacuated areas near Fukushima, Japan.<sup>2</sup>
- The true number, location, existing hazard, and off-site migration potential for toxic and radioactive materials from these sites have not yet been adequately determined.<sup>3</sup>
- The water runoff from these Abandoned Uranium Mines and Prospects affects the Grand River, Moreau River, Belle Fourche River, Cheyenne River, and the Missouri River.
- The Cheyenne River is further damaged by radioactive pollution coming from the thousands of Abandoned Uranium Mines and Prospects in Wyoming according to a study by the South Dakota Department of Environment and Natural Resources, Water Monitoring program in 2006. The Belle Fourche River also receives runoff from the thousands of AUMs in Wyoming, carries it into South Dakota and empties it into the Cheyenne River.



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➤ There are more than 10,000 abandoned, unfilled and unmarked, uranium exploratory wells affecting South Dakota. More than 4,000 unmarked exploratory wells are in the Southwestern Black Hills, some of them large enough for a man to fall into.<sup>4</sup> More than 6,000 are located to the west of the town of Belle Fourche. All of these wells have caused uranium contamination in the Madison aquifer, the drinking water source for many communities in the Region.<sup>5</sup>



➤ There is no dose of radiation that is considered to be harmless. There is no minimum threshold for radiation damage (no dose which is harmless).<sup>6</sup> Radioactivity from AUMs can cause cancer and other organ damage, especially during fetal development and in young children. Higher incidence rates of childhood leukemia, respiratory disease and kidney disease have been recorded in areas near uranium mine sites. Uranium in drinking water has been associated with increases in kidney disease.<sup>7</sup> Chronic exposure to radium in humans by inhalation has resulted in the death of blood cells, tissues and organs. Chronic exposure to radon in humans and animals via inhalation has resulted in respiratory diseases, while animal studies have also reported effects on the blood and a decrease in body weights.<sup>8,9</sup>

➤ No existing federal laws require clean up of these hazardous sites. The US Environmental Protection Agency states, "Unlike the uranium mill tailings cleanup program, there is no specific legislation to address abandoned uranium mines."<sup>10</sup> Most of these AUMs were established under the "General Mining Law of 1872," that does not require reclamation or remediation.<sup>11</sup>

➤ Corporations walk away while the public pays. Mining companies walked away from their clean up responsibilities after decades of mining, leaving the public to bear their toxic legacy. The costs for clean-up of these abandoned sites have been moved from the past uranium mining operators onto the general taxpayers, as have the public health and environmental costs of these toxic sites.

## Sources:

- <sup>1</sup>Uranium Impacts on Lakota Territory, Liliias Jarding, Ph.D., March 201.
- <sup>2</sup>Quote from Professor Kim Kearfott, Ph. D. Nuclear Physics, University of Michigan.
- <sup>3</sup>U.S. Forest Service Map of Abandoned Uranium Mines and Prospects, 2004
- <sup>4</sup>"Final Report, A Reconnaissance Inventory of Environmental Impacts of Uranium Mining in the Edgemont Mining District, Fall River County South Dakota"; Perry H. Rahn and Rowland L. Hall; June 30, 1982.
- <sup>5</sup>"Analysis of aquifer tests conducted at the proposed Burdock uranium mine site, Burdock, South Dakota", Boggs, J.M.; Jenkins, A.M.; May 01, 1980.
- <sup>6</sup>[www.beyondnuclear.org/storage/documents/NO\\_Safe\\_RAD.pdf](http://www.beyondnuclear.org/storage/documents/NO_Safe_RAD.pdf)
- <sup>7</sup>[www.keeptheban.org/wp-content/uploads/2013/08/SEL-Report-Public-Health-Impacts.pdf](http://www.keeptheban.org/wp-content/uploads/2013/08/SEL-Report-Public-Health-Impacts.pdf)
- <sup>8</sup>[www.epa.gov/ttnatw01/hlthef/radionuc.html](http://www.epa.gov/ttnatw01/hlthef/radionuc.html)
- <sup>9</sup>Agency for Toxic Substances and Disease Registry. Toxicological Profile for Radon. Public Health Service, U.S. Department of Health and Human Services 1990.
- <sup>10</sup>Five-year plan - Health and Environmental Impacts of Uranium Contamination in the Navajo Nation page 23
- <sup>11</sup>Report to Congress on Defense-Related Uranium Mines – U.S. Department of Energy – Office of Legacy Management – September 2013

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PO Box 2003 Rapid City, SD 57709  
bhdefenders@msn.com

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