

Published on Environmental Working Group (<http://www.ewg.org>)

## Study May Hamper Fears Over Uranium Mines' Effect on CO River

Superfund Report, staff

Published February 23, 2009

Preliminary study results showing that mine tailings from uranium mining along the Colorado River do not lead to contamination in the main river could undermine environmentalists' and other critics' opposition to Bush administration efforts to permit controversial proposed mines that they fear will contaminate the river.

A University of Arizona researcher involved with the project says the near-complete study shows that much of the uranium in the river is naturally occurring, a key indication that the industrial activity does not harm the water quality for drinking water and agricultural activity that depends on the river for water.

The upcoming study is poised for release in the midst of an ongoing dispute over Interior Department efforts to permit new uranium mines near the Grand Canyon. Congress sought to block the effort and environmentalists filed a lawsuit -- Center for Biological Diversity, et al. vs. Dirk Kempthorn, et al. -- seeking to enforce the congressional requirement. Several state and local government officials have also opposed new mining, fearing it could harm drinking water quality.

But the Bush administration late last year finalized a rule allowing the mining activity to proceed. The Obama DOI has yet to indicate how it will respond to the lawsuit, an environmentalist says.

Agricultural interests, particularly in Arizona -- one of the largest vegetable-growing regions in the country -- have been raising concerns that the proposed uranium mining could cause water quality impairments in the river that could then carry into food products produced using the river's water.

Environmental groups have also raised concerns about new uranium mining in the Grand Canyon area because of concerns over water quality issues on national park land. "The water quality concerns primarily pertain to the ecology of those desert systems. . . [and] the cumulative impact to the major water system" of the Colorado River, says a source involved in the lawsuit.

Activists fear that the new mining activity will result in new waste storage ponds that could collapse just as a coal ash pond adjacent to a Tennessee Valley Authority power plant collapsed, spilling millions of gallons of waste into a nearby river. "There are a significant number of waste ponds that are just sitting around the Moab area," near Yuma, AZ, the University of Arizona source says. "I think we've seen what happens with fly ash, from coal,"

the source says.

Their concerns have been exacerbated due to the increase in uranium mining activity due to increased demand for nuclear power. "Mining claims within 10 miles of the Colorado River increased dramatically in the past five years, from 2,568 in 2003 to 5,545 in 2008," according to a report by the Environmental Working Group, *Without a Paddle: U.S. Law Powerless to Protect Colorado River From Mining*. Mining is the top source of water pollution in western states and the number one toxic polluter in the country, EWG says.

But a spokeswoman with the National Mining Association says that new mining permits under consideration "would all be underground mining. The record for that type of mining here and elsewhere I think is very good in terms of low impact on environmental resources."

Further, she adds, "most of the problems that have been associated with uranium mining come from old processes that were used years ago." And, "any mining that's done would have to meet federal and state water quality requirements."

And now, according to preliminary results of the new study -- due out in the next six months -- the uranium found in the Colorado River is naturally occurring, rather than from mining activity, the scientist involved in the research says. "We can find uranium in the water, but the question is whether it's . . . from mines in the plateaus. . . or natural sources," the second source involved in the study says.

Scientists determined the source of the uranium by studying activity ratios in the uranium's secular equilibrium, part of the ore's makeup that can indicate its origin, the scientist says. The aim is to be able to do probabilistic risk assessments for the agriculture community, the source says. Probabilistic risk assessments are designed to determine the magnitude and likelihood of negative effects of the uranium, the source says.

"We can find uranium in the crops," the source says, but the amount present is "not really an issue," and amounts to one-tenth of one percent of the safe exposure level -- or reference dose (RfD) -- for uranium, the source says. The source adds, "even for children with lighter body weights [the RfD is under one percent]."

But an environmentalist says the upcoming study should not be used to permit new uranium mining until officials have a clear understanding of current contamination levels. "We're sitting atop this legacy of uranium contamination without a clear understanding of what the across-the-board baseline impacts have been," the environmentalist says.

The study is funded by the Technology and Research Initiative Fund through the Water Sustainability Program at the University of Arizona.

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