

Colo. adopts strict regulations on in-situ uranium operations

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Eryn Gable, special to E&E

Colorado officials have approved the nation's most stringent water quality protections for in-situ uranium operations as part of an effort to update uranium-mining regulations that dated back to the late 1970s.

The Colorado Mined Land Reclamation Board voted unanimously last week in favor of the new regulations, which require in-situ uranium firms to restore water quality to either pre-mining conditions or state groundwater standards after mining operations are complete, clarify that uranium mines are subject to the same environmental standards as other hardrock mines in the state, and allow for public participation in mine prospecting decisions.

The decision caps a two-year process that began when the Colorado Legislature passed legislation that included some of the nation's toughest uranium mining laws. Last week's decision by the seven-member reclamation board was the final enactment of the new protections, whose adoption drew praise from environmentalists and residents who had pushed for stronger protections from the downsides of uranium extraction.

"We've experienced the legacy of the impacts from prior uranium mining, so it's ridiculous to think we could permit them again in the same manner with no greater protections than what caused the problems in the first place," said Jeff Parsons, an attorney with the Lyons, Colo.-based Western Mining Action Project who represented Coloradoans Against Resource Destruction (CARD), Environment Colorado and others during the rulemaking process before the state mining board. Colorado's new in-situ uranium mining regulations include measures to protect the state's water resources from radioactive contamination. The rules come as several major mining developments get underway.

Loretta Piñeda, director of Colorado's Division of Reclamation, Mining and Safety, said the rules will ensure that groundwater is protected from contamination resulting from in-situ uranium operations. And despite complaints from some industry officials that the new rules will hamper activity in the state, Piñeda said she does not anticipate a slowdown in mining operations.

"It will be more environmental protection and more information that they'll need to give, but I don't see it as totally restricting any current projects they have going," she said.

Among other things, the new rules:

Require uranium companies to restore groundwater quality to its pre-mining condition or better through a plan approved by the Colorado Division of Reclamation, Mining and Safety prior to the start of the mine.

Require all uranium operations to be considered a "designated mining operation," which makes them subject to the same environmental laws as other mining projects.

Provide an appeals process for mine prospecting decisions.

Require baseline water quality testing for all in-situ uranium projects during the prospecting phase.

Require that mining companies disclose when, where and how mining operations will occur to ensure the public is fully informed about potential impacts.

Surging demand

Colorado's uranium industry saw a surge of activity in the last decade, as uranium prices soared from less than \$10 per pound in 2003 to more than \$125 per pound at their peak in 2007. Prices have since fallen to less than \$50 per pound, but demand for the mineral is expected to climb again as the United States and other countries build nuclear power plants to offset greenhouse gas emissions associated with fossil fuel-based electricity generation.

But in-situ mines, which inject leaching agents into ore deposits to enable the uranium-bearing liquid to be pumped from other wells, have come under scrutiny because of the potential for leaching liquids to spread outside of the uranium deposit and contaminate groundwater.

At Power Resources Inc.'s Smith Ranch-Highland in-situ leaching operation, for example, spills, pond leaks, well casing failures and excursions have become so routine that the Wyoming Department of Environmental Quality has two large three-ring binders full of spill reports from the company's operations. The largest of these spills occurred in June 2007, when 198,500 gallons of injection fluid containing 8 parts per million of uranium spilled from the Highland mine.

Even so, industry officials maintain that in-situ mining is the most benign way to mine uranium. Traditional uranium operations require the use of large tailings piles that are susceptible to the spread of radioactive materials in stormwater runoff and on wind currents.

Industry officials note that cleanup of an aquifer affected by in-situ uranium mining has been successful at other mines throughout the country and there are no historical records in the United States of in-situ mining having a long-term negative impact on public health or the environment.

Indeed, Canada-based Powertech Uranium Corp. says the new rules will allow it to move forward with its 7,262-acre uranium project about 11 miles northeast of Fort Collins near the Wyoming border. The proposed Centennial project would give the company access to 12.8 million pounds of uranium reserves, but the Weld County site is also in the vicinity of more than 100 active groundwater wells, raising concern among environmental groups and residents (Land Letter, Dec. 3, 2009).

The company expects to submit its mining application to the state by next spring, said Richard Blubaugh, the company's vice president for environmental health and safety resources. "The final rules we believe are rules we can live with and we can proceed with out project under," he said.

Jay Davis, a landowner in Weld County and cofounder of CARD, said the rules would hold Powertech accountable to its promises not to contaminate the Laramie-Fox Hills aquifer, which has more than 30,000 commercial, municipal, agricultural and residential wells.

"We were looking for protective rules and regulations. That was really it," said Davis, who owns 80 acres adjacent to the Centennial project site. "It wasn't designed to be prohibitive."

Despite Powertech's assertions that in-situ mining will not contaminate the aquifer, critics fear the spread of uranium and various other elements such as arsenic, selenium, molybdenum, vanadium and radium-226 mobilized in the process. And they contend no company has ever returned an in-situ uranium mine to baseline groundwater levels.

"The track record for in-situ operations is poor," Parsons said. "In every other state, they've allowed mines to weaken the groundwater standards as they go along so they don't have to restore to baseline."

Controversy over prospecting

But Powertech's mine is only one of a number of proposals in Colorado drawing attention.

A proposed uranium mine by Black Range Minerals in an area riddled with abandoned uranium mines that are already polluting groundwater wells has garnered opposition from Tallahassee Area Community Inc., a group of more than 1,000 landowners with homes north of the Royal Gorge on the Arkansas River.

The group's Kay Hawlee maintains prospecting efforts by Black Range in 2007 contaminated numerous drinking wells, but residents were not able to prove those claims because the area lacked records showing baseline water quality. In some cases, residents have had to put in reverse-osmosis systems that cost \$20,000 to address the contamination, she said.

"This was a great opportunity for us to let the public know about the possible danger posed to water quality from prospecting alone," she said of the rulemaking process.

Environmentalists said the provisions regarding public involvement in prospecting reviews bring Colorado's rules in line with neighboring states and will help ensure that the negative impacts of such activities are addressed.

"Even the prospecting and development phases of a mine can have significant environmental and human health impacts," said Dan Morse, executive director for High Country Citizens' Alliance, noting that prospecting activities could include activities that look and feel much like mining, such as building a tunnel.

But Dianna Orf, a lobbyist for the Colorado Mining Association, said the industry is concerned that the new regulations add unnecessary burdens that could stunt mining activity. Orf pointed to an Aug. 11 report from the Fraser Institute based on a survey of international mining executives that found Colorado at the bottom of a list of areas considered attractive for mineral investment, just above developing countries like Ecuador, Mongolia and Kazakhstan.

The rules "are pretty discouraging for anyone looking at investing in a potential mineral operation in Colorado," she said.

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