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Uranium mining in region resumes

By CYNDY COLE Sun Staff Reporter | Posted: Wednesday, January 13, 2010 9:10 am

Driven by a rebound in prices, uranium mining has resumed in northern Arizona after a hiatus of about 20 years.

Employees working for Denison Mines began removing high-grade ore at the Arizona 1 mine north of the Grand Canyon in late December, according to the company's president, and trucking it to a mill near Blanding, Utah.

The mine is about 45 miles southwest of Fredonia in Mohave County, and about 10 miles from the boundary for Grand Canyon National Park.

The ore is refined into yellowcake, after which it can be refined further and sold to utilities worldwide for nuclear power generation.

Today's workers are re-entering a mothballed mine built before uranium prices last crashed in the late 1980s.

The deposit is a 1,500-foot-deep, straw-shaped formation of sedimentary rock called a breccia pipe. It contains uranium ore below the ground, along with various rock layers.

These breccia pipes are sometimes identifiable to the eye along the canyon walls of the Little Colorado River, and in the Grand Canyon.

SIX MINES POSSIBLE

Prices for uranium refined into yellowcake have varied from \$10 per pound to \$138 per pound in recent years.

Denison is projecting prices in the range of \$53 to \$65 per pound.

It's expected that six uranium mines could open on federal lands bordering the Grand Canyon, according to estimates by the Bureau of Land Management, and more than 7,500 claims have been filed in northern Arizona.

The mine's opening comes despite a November lawsuit by environmental groups contending that legally required documents for this mine are outdated and expired, and that opening it without them would violate the Endangered Species Act, among other laws.

"They're challenging the permits, but the BLM and state have given us all the permits we need to operate," said Ron Hochstein, Denison president and chief executive officer.

The company said this was the first of several Arizona mines it plans to open.

There has been no ruling on the lawsuit that attempted to block the opening of the mine, said Grand Canyon Trust attorney Neil Levine.

"Any mining in the area has the potential to affect groundwaters and surface waters. That causes both Las Vegas and Los Angeles' water districts to object to the mining," Levine said.

The Sierra Club and the Center for Biological Diversity also sued to stop the mine from opening.

The environmental groups hope to stop a lot of uranium mining by getting federal action to put about 1 million acres of federal land on both sides of the Grand Canyon off-limits to new mining claims.

Interior Secretary Ken Salazar has ordered a review of the environmental, economic and other impacts associated with uranium mining in order to make a decision on that request, and he has put new mining claims on hold for two years in the meantime.

"It's unfortunate that the BLM has decided to ignore the spirit of Salazar's attempt to protect the Grand Canyon from uranium mining," said Stacey Hamburg, of the Sierra Club.

PROPERLY AUTHORIZED

The Bureau of Land Management and Arizona Department of Environmental Quality said Arizona 1's opening was properly authorized.

"It was a long and emotional process but we're proud of the science-based product," ADEQ Director Ben Grumbles said, in a

statement. “The final permits protect the environment, provide for good jobs, and hold Denison accountable. Future permits for underground uranium mining need to have similar, stringent provisions for monitoring, pollution prevention, and legal accountability.”

ADEQ previously denied Denison’s bid to open two other uranium mines at which the company had proposed using 20-year-old liners and impoundment ponds to capture mine-related runoff.

The mining issue has proven contentious.

The Coconino County Board of Supervisors issued a resolution against it in 2008; the Mohave County Board of Supervisors have voted in support.

The director of Arizona’s Department of Mines and Mineral Resources told a U.S. House subcommittee last summer that she did not want a prohibition on mining in the Grand Canyon region, saying it was needed for power generation worldwide. She added that any environmental harm as a result of mining was unlikely, and that mining jobs paying \$60,000 to \$80,000 apiece were needed.

YELLOWCAKE IMPORTER

On balance, the United States is an importer of yellowcake, mostly from Canada, Australia and Russia.

The mining department director, Madan M. Singh, said there was enough uranium in the area proposed to be put off-limits to replace all the U.S. power generated by coal plants for a decade, or the energy equivalent of all the oil in the largest oil field in the country.

U.S. Geological Survey estimates of the uranium available in the area are not as large, but the estimates are wide-ranging.

The uranium-bearing breccia pipes of northern Arizona are the most concentrated source of uranium known in the United States, according to multiple sources.

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In brief

What: Uranium ore mining in northern Arizona resumes in late December for the first time in about 20 years.

Where: At the Arizona 1 Mine on the Arizona Strip in Mohave County, about 45 miles southwest of Fredonia and 10 miles from the boundary of Grand Canyon National Park. Ore is being sent to a uranium mill in Blanding, Utah, about 315 miles away. The refined yellowcake produced from this mine can be sold to utilities internationally, and some will likely end up with the Korea Electric Power Corp. in South Korea, which owns about 20 percent of Denison Mines as of April, 2009.

How much: An estimated eight truckloads (20 tons each) of ore would be headed out of the mine daily when it reaches full production.

The company proposes to mine a known 67,000 to 72,121 tons of ore (or more if other deposits are discovered deeper), which would be enough to produce about 850,000 pounds of yellowcake after refinement.

Profits from the mine are estimated at \$22.2 million total by owner Denison Mines, but could vary depending on the going price for yellowcake.

Why: This is driven by a rebound in uranium prices in recent years.

What else: Opponents contend the mine’s owners haven’t done all they must to prove this mine can operate in light of a two-year prohibition on new uranium mining on most federal lands surrounding the Grand Canyon. The Bureau of Land Management says Denison has all the permits it needs.