

The Coles Hill Progress



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Experts Say Uranium Mining Protects Public Health and Worker Safety



Uranium mining and milling are more heavily regulated and protective of public health and the environment today than in years past. This was the consensus of a panel of experts assembled by the Virginia Tech Department of Geosciences for a symposium on uranium mining at the Danville Institute for Advanced Learning and Research on Saturday, November 12.

The panel of health physicists and radiation protection specialists all agreed that, due to advances in technology and more stringent regulations, today's industry successfully manages health and safety risks for workers and the general public. Here is an overview of some of the specific issues covered at the symposium:



WORKER SAFETY

Since the industry adopted improved mine ventilation practices in the 1970s, radon gas exposure for workers has been largely eliminated as a concern. In fact, a recent study of

Saskatchewan miners concluded that miners receive far more radon exposure at home than at work in the mines.



WATER QUALITY

Uranium operations have become much better at protecting water quality since the 1970s, said radiological risk specialist Dr. Doug Chambers. Storing mill tailings in below-grade cells, rather than the above-ground ponds and dams used in the early years, prevents contamination of groundwater and local streams and rivers. Dr. Chambers said several former Canadian uranium sites are now thriving destinations for recreational fishing and retirement living.



PUBLIC HEALTH

Dr. Theresa Coons, a uranium toxicologist and epidemiologist, said that numerous public health

studies have shown no difference in cancer rates or cancer deaths between populations living near uranium mines and the general population.

Dr. Ward Whicker, a radioecologist from Colorado State University, predicted that locating a uranium mine and mill at Coles Hill would not significantly elevate radiation levels near the Coles Hill site.



NATURAL RADIATION VS MAN-MADE RADIATION

Contrary to common misconceptions, the average person receives five to ten times more radiation each year from natural background sources than a uranium miner receives from working in a mine.

Health physicist Dr. Steve Brown explained that there is actually just as much radiation in a "bunch" of 10 bananas as there is in a handful of uranium ore.

Dr. Whicker showed that the nuclear industry, including uranium mines and mills, is only responsible for 0.15 percent of radiation exposure in the U.S. The rest comes from natural background sources and routine medical procedures such as CT-scans and x-rays. For instance, a single abdominal x-ray will expose a patient to more radiation than a uranium miner is exposed to at work in an entire year.

The complete video of the symposium, along with the panelists' powerpoint presentations, can be downloaded at <http://www.geos.vt.edu/events/uranium/>.

IMPORTANT DATES:

DEC. 1

National Academy of Sciences study release

DEC. 6

Uranium Mining Subcommittee public meeting - Chatham, Va.

DEC. 12

Uranium Mining Subcommittee public meeting - Richmond, Va.

DEC. 19

Coal & Energy Commission public meeting - Richmond, Va.

Canadian Officials: Uranium Mining Has Safe Track Record

By Larry Aaron

Along with some other local citizens and Virginia state legislators I traveled to Saskatoon, Canada, in late September to visit Canada's largest uranium mining operation, Cameco's Eagle Point mine and Rabbit Lake mill.

Observing an operating uranium mill and an active underground mine offered me insight into what may occur in Pittsylvania County in years to come. My most important question was this: how have the streams, lakes and rivers around Cameco's uranium mines and milling operations remained pristine and healthy?

Water was everywhere. The abundant lakes appeared from the window of the plane like elongated strings of pearls. By the time we neared the uranium operation there seemed to be as much water as land.

In our briefings at the mine and milling site, Cameco officials offered scientific, technological and workforce information regarding what goes on there.

After an extensive tour of the milling plant, we went into the uranium mine and followed the tunnel under Wollaston Lake. There we viewed actual drilling as the miners prepared to retrieve more ore.

The absence of environmental and health issues was a common theme among those we met from Cameco. For instance, in casual conversation, Val Schwindt, safety director at the Cameco operations, stated that he could not recall any pollution or health problems with the company's modern-day mining methods.

On the last day of our visit to examine Canadian uranium operations in Saskatchewan, we met with government regulators in Saskatoon.

Kevin Scissons of the Canadian Nuclear Safety Commission pointed out that some workers receive more radiation from background sources in their homes than they do at the mine and mill. And, Scissons remarked, "It is safer to work in a uranium mine than in a Saskatoon government office." A Cameco mine worker even told me that his brother, who



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LARRY AARON

is a pilot, gets about five times more radiation exposure per year than he does working at the mine.

In personal correspondence with me, Scissons further noted, "There has not been any contamination or heavy metal issues in Wollaston Lake from the Rabbit Lake (milling) site."

I asked Tim Moulding from the Saskatchewan Ministry of Environment to discuss pollution concerns associated with uranium operations compared to other heavy metal mines (copper, nickel, etc). He remarked that uranium mining presents fewer pollution issues than any other type of mining in Canada.

Neil Crocker, chief mining inspector for the province, categorically stated that today, with all the regulations, health issues for uranium workers are statistically the same as the general population.

He further stated, "When you see data from well run operations you find health and pollution issues are really non existent."

This confirmed what Cameco's superintendent of environment and reclamation, Maurice Balych, related in my recent correspondence with him: "There have been no health issues directly related to uranium or radiation exposure at any of our mining operations."

Our group of Virginia legislators and citizens also heard from Gary Delaney, chief geologist, and Cory Hughes, director of mineral policy, at the Saskatchewan Ministry of Energy and Resources. Their comments were equally encouraging. Canada's uranium operations appear to be a complete success.

The real question, of course, is not about Canada but about here. Can we mine and mill uranium safely in Pittsylvania County?

That's up to us. They do it in Canada.

Larry Aaron is a gifted resources teacher in Pittsylvania County. The full version of Mr. Aaron's article was published as a series by the Chatham Star-Tribune on September 28 and October 5 & 12.



Cameco's Eagle Point mill and Rabbit Lake mine are the largest uranium operation in North America and share several characteristics with the Coles Hill site, most significantly precipitation levels. Canadian regulators said in 36 years of operation, there have been no instances of environmental contamination or risks to public health.

Economy And Public Health Thrive In Former Uranium Community In Canada

By Willie Fitzgerald

Early last month, I joined a group of eight people from Pittsylvania County for a trip to Elliot Lake in Canada. The purpose of the three-day journey was to interact first-hand with a cross-section of local citizens who live in one of the world's largest former uranium mining communities.

The basic question on my mind was this: can a community sustain uranium mining and milling for a number of decades and then, using the best practices available, have its people, environment and natural resources returned to normal, without harm?

While I do not endorse or oppose uranium mining in Virginia, I can say without reservation that everything I saw on this trip created a very positive impression.

Known as the "former uranium capital of the world," the Elliot Lake operation was a leading uranium producer for the world from the 1950s until the mid 1990s.

To me, that sounded like a good place to see what things looked like almost 15 years after the mining had ceased.

The most over-arching aspect of the visit was the absence of any "stigma" attached to the city. The people that I talked to were proud of the area's heritage and a number of them volunteered that they would welcome mining back.

The town is doing well economically, particularly in sales of homes on the lakes, and the remnants of the former mining operation are completely blended into the landscape.

When mining ceased in the 1990s, the mining companies and local citizens saw an opportunity to reclaim the former mining

and milling sites and market Elliot Lake's natural beauty to active retirees and tourists seeking outdoor experiences.

Unlike what would be done if mining and milling takes place in Pittsylvania County, the tailings (processed ore that no longer contains uranium) were dumped in lakes. People live within sight of these same lakes and freely drink water downstream of them. We had dinner one night at Dunlop Lake Lodge, which is on a lake directly downstream of a tailings dam. Sure enough, we drank water from the lake at dinner, and a family physician who lives on the lake and attended the dinner said his family drinks the water every day.

One of the surprising aspects to me was the absence of health concerns among the townsfolk there. Of course the water is monitored, and Canadian safety regulators regularly test soil and air samples. Residents seem to have full confidence that there are no threats to their health.

Right now, I await the report from the National Academy of Sciences on December 1st, which I trust will give important findings to guide legislators in deciding whether it is prudent to move forward or keep the moratorium. I await this report before personally taking a position on this matter.

Willie Fitzgerald has been president of the Pittsylvania County NAACP for more than 20 years and lives in Chatham. He is retired from Ennis Business Forms. This article was originally published in the Chatham Star-Tribune on Wednesday, November 16.



WILLIE FITZGERALD

What Others Are Saying... About Our Trips to Canada

"BEFORE I WENT UP [TO ELLIOT LAKE], I WAS KIND OF NEUTRAL... NOW, I DON'T HAVE ANY QUALMS AT ALL ABOUT MINING... THE WAY IS ALREADY THERE FOR MAINTAINING THE SAFETY OF THE PEOPLE [AND] THE WATER SYSTEMS... THE TECHNOLOGY IS AVAILABLE." – L.P. Moss, Local Pittsylvania County resident, *Richmond Times-Dispatch*, 10/13/11

"IN CANADA, THEY HAVE SUCCEEDED IN DOING [URANIUM MINING] SAFELY." – David Luther, Vice Mayor of the Town of Danville, *Danville Register and Bee*, 10/8/11

"IT'S OVERWHELMING HOW MANY SAFETY PROCEDURES AND SAFETY PRECAUTIONS THEY HAVE THERE... THEY DON'T LEAVE ANYTHING TO CHANCE... I DON'T SEE [MINING IN VIRGINIA] BEING A POTENTIAL DISASTER." – Larry Aaron, Pittsylvania County School teacher, *Danville Register and Bee*, 10/8/11

"I CERTAINLY DON'T HAVE ALL OF THE ANSWERS, BUT I FEEL COMFORTABLE THIS PROJECT COULD BE DONE SAFELY HERE AND I FEEL CERTAIN IT WOULD HAVE AN ENORMOUS POSITIVE ECONOMIC IMPACT ON THE COMMUNITY." – Gretchen Clark, president of Pittsylvania County-based Reynolds-Clark Development Inc., *WLSL 10*, 10/8/11