



# KEEP THE BAN ON URANIUM!

Protect our heritage, our health and our future

## Health Hazards of Uranium Waste

Virginia has a nearly 30-year ban on uranium mining. Foreign-backed interests are trying to lift the ban so they can mine and process uranium, starting in Southside Virginia. Drinking water, human health, farmland, property values, wildlife and tourism across Virginia are at risk.

Uranium mining and processing produce waste material commonly referred to as “tailings” that would put the health of Southside Virginia and downstream communities at risk. This toxic waste retains significant amounts of uranium as well as by-products, such as radium and thorium, heavy metals including lead, arsenic, and mercury, and other toxic materials. While independent researchers continue to determine the full effects, studies have linked exposure to uranium waste to negative impacts on human health<sup>1</sup>.

- Exposure to uranium waste has been linked to cancer and respiratory diseases and can exert toxic effects on kidney function, bone development, and the formation of blood cells<sup>2</sup>.
- The radioactive chemical element radium is found in uranium waste. Radium decays into the radioactive gas radon, which is difficult to contain. If ingested, it may increase the risk for bone, liver, lung and breast cancer<sup>1</sup>.
- African Americans may be more vulnerable to the biological effects of uranium. African American women in particular have shown an increased risk for breast cancer due to elevated uranium concentration in groundwater<sup>3</sup>.
- Babies from mothers who had prolonged exposure to uranium waste in Church Rock, New Mexico, suffered a significant increase in birth defects<sup>4</sup>.

The Coles Hill site alone would generate at least 28 million tons of uranium waste. Uranium waste remains radioactive for thousands of years and needs to be contained on-site indefinitely. A uranium mill waste containment failure at Coles Hill could result in the contamination of local groundwater sources and downstream drinking water sources for over 1.9 million people in Halifax, Virginia Beach, Norfolk, Chesapeake and North Carolina<sup>1</sup>.

### References:

1. Michael Baker, Jr, Engineers Inc. “Uranium Mining in Virginia – Can Downstream Drinking Water Source be Impacted?” Mar. 2010.
2. Wagner, Sara E., et al. "Hypertension and Hematologic Parameters in a Community near a Uranium Processing Facility." *Environmental Research* 110 (2010): 786-97.
3. Wagner, Sara E et al. "Groundwater Uranium and Cancer Incidence in South Carolina." *Cancer Causes Control* 22 (2011): 41-50
4. Shields, L. M et al. "Navajo Birth Outcomes in the Shiprock Uranium Mining Area." *Health Physics* 63.5 (1992): 542-51.