Uranium mining interests are lobbying legislators to lift the current ban on uranium mining in Virginia. Lifting the ban should not be done without considering effects on the health of the environment and the economy.

Background
During the late 1970s and early 1980s, uranium deposits potentially worth billions of dollars were discovered in Pittsylvania County, extending into the Piedmont region of Virginia.

In 1981, the Virginia General Assembly asked the Virginia Coal and Energy Commission to evaluate the impacts of uranium production. In 1982, following that assessment, the Virginia General Assembly established a moratorium on uranium mining that remains in effect today. The legislature is currently reevaluating the moratorium and is considering lifting it. Virginia Uranium Inc. is poised to mine and mill uranium in Pittsylvania County, at a site known as Coles Hill, when the moratorium is lifted.

There is also the probability of mining in other regions of the state. A Virginia Tech professor reports that there is “a very high probability that there are other deposits of the same size, same grade, as Coles Hill located in the eastern United States.” Officials with the mining company have stated that the lead geologist who discovered Coles Hill is “insistent to this day that it is the first of more, major discoveries in Virginia.”

Part of the legislative reevaluation process includes a study being conducted by a committee of the National Academy of Sciences and scheduled for completion in 2011. The study will help inform the legislature’s decision and will examine a number of environmental considerations. The study will also provide independent, expert advice and information regarding the future of uranium mining in Virginia.

The study will not recommend lifting or continuing the moratorium. The study committee says that whether uranium can be mined safely in Virginia is a public policy question for the General Assembly. The legislature will decide based on this study and three others being conducted concurrently, which are evaluating socioeconomic effects and water-quality impacts. The final decision will presumably be made in 2013, after the public reviews the studies, considers the impacts, and contacts their elected representatives. Some interests want the moratorium lifted in 2012, which would preclude any meaningful review and assessment of the reports.

Environmental Protection and Industrial Interests
Virginia has been a leader in environmental protection. When the Clean Water Act was passed in 1972, the State Water Control Board expanded its staff, regionalized operations and, in 1975, assumed the federal national pollutant elimination discharge system (wastewater discharging permitting) program. The State Water Control Board was established in 1946; through the Department of Environmental Quality, it administers the State Water Control Law and associated regulations. Virginia is, and has been for decades, an approved
HOW WILL VIRGINIA REGULATE URANIUM MINING?

state for Clean Air Act purposes. Virginia operates an independent solid waste program that regulates solid waste landfills and the state administrates its own wetlands permitting program.

Despite this early history of leadership, in recent years Virginia has a checkered record of protecting our natural resources. In my four decades as an environmental professional in Virginia, I have sometimes seen shortsighted and weak leadership for the environment in the executive and legislative branches. Natural resource regulation has often been motivated by politics and economics rather than science and the long-term benefits of a healthy environment. Only a few of Virginia’s decision makers appreciate the direct link between a healthy environment and a vibrant economy. The latter simply does not exist without the former. Yet the general fund budget for environmental protection and conservation programs comprises less than 1 percent of the state’s total general fund budget. The 2010 general fund appropriation for the commerce and trade secretariat was nearly $1.2 billion, while the seven agencies of the natural resources secretariat were nearly $1 billion, so the state’s total general fund budget. The 2010 general fund appropriation for the commerce and trade secretariat was nearly $1.2 billion, while the seven agencies of the natural resources secretariat responsible for protecting the commonwealth’s environmental and cultural resources had to split $425 million.

During the past few years, there have been a number of proposed changes to Virginia’s environmental statutes and regulations. Some, notably Chesapeake Bay-related legislation, have or would have strengthened environmental protections, but most have weakened environmental protections for the sake of various special interests. The majority of those efforts to weaken the law have been successful, and Virginia’s environment is more vulnerable as a result.

In 2005, the State Air Pollution Control Board offered a few very reasonable changes to Virginia’s mercury pollution control strategy. Mercury contamination of surface waters is a growing problem and these new regulations, while quite modest in nature, could have slowed the growth of the mercury problems. These regulations were never promulgated, due to opposition by potentially affected industry.

In 2007 and 2008 there was a concentrated effort to eliminate Virginia’s three citizen environmental regulatory boards and vest nearly all of their authority in the executive branch. That plan, which was not successful, would have reduced the public’s involvement in permitting and other environmental protection activities and given even greater control to some special interests.

In 2010, the General Assembly passed Senate Bill 128 that allowed major sources of air pollution in nonattainment areas to buy compliance through a trading scheme rather than actually reducing emissions and improving air quality. This legislation again benefitted special interests at the expense of the health of those living in nonattainment areas, and at the expense of future economic growth in those communities. This legislation was later repealed in deference to changes in anticipated federal Environmental Protection Agency regulations, but the special-interest protection purpose of the original bill remains unchanged by that action.

In 2011, Senate Bill 1025 and its companion bill in the House of Delegates exempted the coal industry from the basic effluent toxicity testing requirements that apply to other industrial discharges. This change in the law precludes environmental protection; it transferred authority from the State Water Control Board and the environmental professionals in state agencies to the Virginia General Assembly.

Virginia has many miles of rivers that are chronically polluted by industrial chemicals. If dischargers are exempted from routine testing that could lead to pollution reductions, because it costs too much or the dischargers are afraid of what they might find, then we are destined to repeat the mistakes of the past — except this time we will have no excuses. This waiver from such a fundamental environmental regulatory tool is problematic. Can a uranium mining industry in Virginia be similarly accommodated?

The legislature appears to be on a course to further weaken struggling environmental regulators and regulations to assist industrial growth. This flawed strategy overlooks the fact that environmental health is critical to economic health, and the weakening of the regulatory system inhibits industrial development. For example, new industry cannot be recruited to nonattainment areas or to states without a high quality of life, which for most persons includes clean air and water. An industrial development strategy that benefits business and industrial interests at the cost of environmental quality is shortsighted, counterintuitive, and harmful to the commonwealth’s economic interest.

Regulating the Uranium Industry

While Areva — a global nuclear energy company active in uranium mining, milling and enrichment — has operations in Lynchburg, there are no mines or milling operations in Virginia because of the 1982 moratorium. Consequently, there are no environmental programs to regulate uranium mining, milling, or uranium tailings waste disposal in Virginia.

State regulations for uranium mining and processing would be required. Depending on final requirements in such regulations, various permitting, monitoring, inspection, and enforcement programs would be developed and necessarily funded.
The regulatory landscape for uranium mining and milling operations is complex and invokes both federal and state authority across the entire matrix of legal constructs for environmental protection. Mining operations would fall under Virginia regulatory authority. The regulation of the milling process — whereby uranium ore is milled into yellowcake — is regulated largely under federal authority. The Nuclear Regulatory Commission is charged with enforcing milling regulations. However, states can apply to become “agreement states,” whereby the commission delegates day-to-day enforcement, management, and monitoring of milling sites to state regulators. In Virginia’s case, the delegation would be to the Department of Mines, Minerals, and Energy. Should the moratorium be lifted, evidence is strong that Virginia will become an agreement state, taking over all aspects of uranium mining, milling, and hazardous waste disposal from the federal government. Virginia is already a “partial agreement state” in regard to source material and all by-product materials except uranium mill tailings.

The Environmental Protection Agency also plays a role in setting standards. Applicable legal frameworks include the Clean Water Act; Clean Air Act; Safe Drinking Water Act; Resource Conservation and Recovery Act; Comprehensive Environmental Response, Compensation, and Liability Act (Superfund); National Environmental Policy Act; and Uranium Mill Tailings Radiation Control Act.


The commonwealth — presumably through the Department of Mines, Minerals, and Energy and Department of Environmental Quality — would be responsible for the safety of miners and all those who may be exposed to the hazards of uranium mining by contact with contaminated water, air, and land, and for the short- and long-term impacts to businesses and industry.

**Who Pays?**

Funding is essential. The Virginia Department of Environmental Quality (DEQ) in 2011 will receive about 21 percent of its budget from state general fund appropriation. That means 79 percent of DEQ’s budget must come from federal support, various grants, permit fees, and other sources. This is a precarious budgeting position.

During the administration of Virginia Governor Mark R. Warner (2002–06), permit fees were increased twice, the DEQ budget was cut, and it was necessary for the agency to occasionally borrow money from the state treasury to meet payroll. This was not a formula for stable operations.

Budget restrictions force the DEQ to operate on a risk-based priority basis. The threats that present the greatest risk to human health or the environment get the most attention and consume the greatest percentage of resources. Programs not mandated by law, not funded by the federal government, or not supported by permit or other fees are low priorities. Staffing and operational budget cuts often come at the expense of data collection, inspection frequency, or travel and training restrictions, further hampering basic environmental protection practices.

On February 7, 2011, a DEQ representative advised the National Academy of Sciences committee that new environmental regulatory programs for uranium mining and milling will be a high priority for the agency and that high-priority programs are properly staffed and funded. While that is the only politically correct assurance that could be given, it was offered without knowledge of the type of mining that would be employed, the number of mines that will be active, the location of the mines, the extent of milling activities, or the requirements of the regulations yet to be promulgated. Without any of this information, it is difficult to estimate the number and type of staff that might be required, the travel and training costs, laboratory costs, equipment costs, and contingency requirements.

If the commonwealth is funding the DEQ at about the 20 percent level, what programs will be cut to fund the regulation of uranium mining and milling? Chesapeake Bay restoration? Air quality protection? Water quality protection? Or will these new programs be funded by permit fees that are set by the General Assembly and are subject to increase or decrease by the General Assembly?

Permit fees that fund a single industry are inherently problematic. Virginia is the nation’s second largest importer of municipal solid waste and “land protection” programs will receive about $2.25 million in general fund money to regulate millions of tons of garbage that are landfilled in 2011. Permit fees fund most programs, raising another $11 million a year. Should the imported solid waste stream be reduced, permit fees may not pay for regulatory activities associated with the long-term management of those facilities.
Only one company has well-developed plans to mine and mill uranium in Virginia. If permit fees support the regulation of uranium mining and milling and at the onset only one company is paying those fees, how large must the fees be? While that may not be a burden to the mine owners while mining and milling is profitable, is it a conflict of interest for one regulated entity to be totally funding the regulators? What happens if uranium prices fall and the company decides the fees are too high? Will the General Assembly lower them? Eliminate them? Then what happens to the regulatory efforts?

How Well Will Virginia Regulate Uranium Mining?

A marginal effort to control an extremely serious threat to the health of Virginians and Virginia’s environment will benefit no one. The decision makers and political leaders want economic success, and that often translates into fewer regulations, a less burdensome regulatory climate, and low environmental protection costs. Unhealthy tension and competition between business and environmental protection does not promote either.

Without a serious commitment to human health and environmental protection, the mining and processing of uranium is potentially disastrous. It remains to be seen whether environmental protection funding, historical weather patterns that are inconsistent with safe mining, risks to existing business interests, the size of the potentially affected population, and the numerous local, regional, and statewide environmental issues will get the same consideration as the promised economic benefits. If they do not, and the mining moratorium is lifted, Virginia and Virginians will continue to lose, because the relationship between the environment and the economy is misunderstood and prejudiced.

Endnotes:

1 Report of the Coal and Energy Commission to the Governor and General Assembly of Virginia (1986)
5 Virginia Department of Planning and Budget, see www.dpb.virginia.gov.
6 2010 305(b) 303(d) Integrated Report
7 DEQ Director David K. Paylor, Annual Budget Briefing for Virginia Forever, Dec. 20, 2010
8 Id
9 Id

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