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Lawrence P. Landry

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POTENTIAL URANIUM DEPOSITS REPORTED IN VIRGINIA

A surprising new industry, fraught with an unhappy history of environmental ills, may soon be coming to the Commonwealth. This newcomer is uranium mining. Although uranium mining is generally associated with the western United States, a recent government survey has reported that certain parts of Virginia may contain deposits of the mineral in quantities suitable for mining. Marline Uranium Corporation, a Canadian-based energy firm, has been attracted by these potentials, and is currently buying exploratory option leases in Pittsylvania County (38,000 acres presently leased) and Orange, Culpeper, Fauquier, and Madison Counties (12,000 acres presently leased). The leases give Marline the right to explore the land for uranium and to mine it if adequate concentrations exist. Landowners should consult legal counsel before signing as the lease will tie up the owner's use of the land for 15 years, and may give the landowner possession of the radioactive spoil left after mining.

There are a host of potential health and environmental problems associated with the uranium industry. The mining process involves either an open pit or underground mine, usually comprising from 30 to 100 acres. Both processes cause the release of radioactive Radon gas from the ore, which is responsible for extremely high rates of lung cancer among miners. Areas close to the mines will also be exposed to potentially hazardous concentrations of the gas. Another problem stems from the fact that groundwater is always present where there is uranium ore. The mines must be free of this water, so it is pumped out, often in prodigious quantities. In some areas, the groundwater supply has been seriously depleted by the pumping operations. Also, the mining activities frequently contaminate this water. Significant increases of radioactive chemicals and other metals have been observed in surface and underground water supplies in many areas where uranium has been mined. Because groundwater moves so slowly, any contamination will remain for many years.

Probably the greatest long-term hazard comes from the "mill tailings," that part of the ore which remains after the extractable uranium has been removed. It is difficult to extract the uranium efficiently. Therefore, these mill tailings contain 85 percent of the ore's original radioactivity. The extraction process also increases the ore's volume and reactivity. The result is large piles of radioactive tailings at the mill site. The chemicals in the tailings will dissolve in rainwater and be transported to surface, irrigation and underground waters. Air pollution occurs through continued volatilization of Radon gas and by the wind, which can pick up small particles and transport them for very long distances. Due to the extremely long life span of the radioactive chemicals involved, any contamination may remain a problem for centuries. While the Nuclear Regulatory Commission requires its licensees to undertake certain mill pile stabilization practices, a 1980 report by the United States Geological Services states, that there have been no piles stabilized in a manner consistent with those requirements.

The chances of finding a commercially feasible deposit are reported to be small. However, the ramifications of such a find are extensive. Individuals and the state should be prepared to deal with the situation if uranium in quantities suitable for mining are found. The legislature has passed a bill authorizing the Coal and Energy Subcommittee to evaluate the environmental, health, safety and welfare effects of uranium mining. Other eastern states faced with a similar situation have passed or are currently considering similar studies, a seven year moratorium on any activities beyond the exploration state, and regulatory legislation for the exploratory and mining processes.

For more information on this topic, contact: Piedmont Environmental Council, 28-C Main Street, Warrenton, Virginia 22186, phone 703 347-2334.

L.L.