SCIENCE

27 JUNE 1986
VOLUME 232
NUMBER 4758

Dealing in Hot Property

The Department of Energy announcement on potential sites for radioactive waste repositories has been greeted with the predictable outcries of protest. Congressmen and governors of western states have denounced the decision to eliminate eastern sites and are declaring that their own localities shall not be the "garbage dumps" of the country. It seems to me that this entire process and possibly similar emotional decisions should be reexamined. In our age of the "official leak" and the "pork barrel" bonus, these two techniques together might solve the nuclear waste problem expeditiously and painlessly.

The first step would be to classify all reports on nuclear waste. The facts of nuclear waste disposal are straightforward. There have been no major accidents involving transport of high-level nuclear waste. The so-called caskets for transporting waste have been tested—trucks loaded with them have been run into brick walls at 60 miles an hour, railroad trains have run into trucks with containers, and there have been many other insults of dramatic proportions. No leakage has occurred. The storage containers are designed to last 300 to 1000 years. Even if they then decompose, the geology of the waste site is selected to limit any further significant spread of radioactive material. A more expensive but technically feasible design could put the containers in shafts that would be accessible so that modifications could be made at some future time. New materials might be available 1000 years from now. By then most of the fission products would have decayed to a much lower level.

The American plan for burial is to use a combination of borosilicate glass and spent-fuel devices placed in corrosive-resistant ferritic containers; the Swedish plan is to put spent-fuel devices inside copper containers. Remote possibilities, such as that copper might be a highly valuable metal in 1000 years enticing grave robbers to steal the containers and so distribute radioactive material around the planet, are considered. While such possibilities are being debated, the radioactive material is being stored above ground in cooling pools, a potentially less safe procedure. Yet no major accident has occurred.

Facts are not believed when they are delivered in pious statements by public officials who lack the credentials of rock stars or television anchors. The National Academy of Sciences' verification of public statements is tainted, too, since it is part of "the establishment." The only way it is possible to convince the public is to classify all this material and then leak it sequentially over time. The revelation of a secret creates instant truth. This leaky-faucet approach is slower than official news bulletins but, obviously, it will lead to much higher credibility.

The second step employs the "pork barrel" technique. A sum of several hundred million dollars should be allocated to the locality that obtains a waste site. Moreover, a careful summary should be compiled of the boost to the local economy from new construction and the added personnel on payrolls to administer the facility, to say nothing of the elimination of local crime due to the large number of special police. These economic advantages should be presented in a manner so as to insinuate that the federal official was deliberately tilting the selection of this attractive economic plum and prime tourist attraction to favor local political cronies. An appropriate congressional committee would then investigate and demand that site selection be made available to all regions.

If these two methods were used, the Department of Energy would be flooded by offers from states and localities with deserted mines, barren hills, and decaying ghost towns as appropriate sites for radioactive repositories. A museum lit by Čerenkov radiation would be pushed by chambers of commerce; committees entitled "Waste Makes Haste" would be sending lobbyists to Washington to bring home the hot atom before other communities get into the act. Since it is apparent that leaking secrets and pork barrel politics are impossible to prevent, it is time to use them productively to solve some of our most serious problems. This method of finding an abundance of sites for nuclear waste may be helpful in the future for locating prisons, petroleum refineries, and other underprivileged institutions that have acquired bad public images. This editor is planning to organize a venture capital group to buy some abandoned lead mines in order to capitalize on such a sensible approach to a better environment.—DANIEL E. KOSHLAND, JR.