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Contact: Nancy Ross-Flanigan
rossflan@umich.edu
734-647-1853
University of Michigan

Experts call for local and regional control of sites for radioactive waste

ANN ARBOR, Mich.---The withdrawal of Nevada's Yucca Mountain as a potential nuclear waste repository has reopened the debate over how and where to dispose of spent nuclear fuel and high-level nuclear waste.

In an article in the July 10 issue of *Science*, University of Michigan geologist Rodney Ewing and Princeton University nuclear physicist Frank von Hippel argue that, although federal agencies should set standards and issue licenses for the approval of nuclear facilities, local communities and states should have the final approval on the siting of these facilities. The authors propose the development of multiple sites that would service the regions where nuclear reactors are located.

"The main goal . . . should be to provide the United States with multiple alternatives and substantial public involvement in an open siting and design process that requires acceptance by host communities and states," the authors write.

Ewing and von Hippel also analyze the reasons why Yucca Mountain, selected by Congress in 1987 as the only site to be investigated for long-term nuclear waste disposal, finally was shelved after more than three decades of often contentious debate. The reasons include the site's geology, management problems, important changes in the Environmental Protection Agency's standard, unreliable funding and the failure to involve local communities in the decision-making process.

Going forward, efforts should be directed at locating storage facilities in the nation's northeastern, southeastern, midwestern and western regions, and states within a given region should be responsible for developing solutions that suit their particular circumstances. Transportation of nuclear waste over long distances, which was a concern with the Yucca Mountain site, would be less of a problem because interim storage or geologic disposal sites could be located closer to reactors.

"This regional approach would be similar to the current approach in Europe, where spent nuclear fuel and high-level nuclear waste from about 150 reactors and reprocessing plants is to be moved to a number of geologic repositories in a variety of rock types," said Ewing, who is the Donald R. Peacor Collegiate Professor in the Department of Geological Sciences, and a professor in the departments of Nuclear Engineering & Radiological Sciences and Materials Science & Engineering.

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For more information on Ewing, see
www.ns.umich.edu/htdocs/public/experts/ExpDisplay.php?beginswith=Ewing

Science: www.sciencemag.org