

RECEIVED

OCT 1 0 26 01



551512

Lake H. Barrett, Acting Director
Office of Civilian Radioactive Waste Management
U.S. Department of Energy
Washington DC 20585

17 September 2001

**re: Yucca Mountain comments per 66 FR43850
as requested by your letter of 27 August 2001**

Dear Mr. Barrett:

Thanks for your letter of 27 August requesting my comments on whether the Secretary should recommend to the President the development of Yucca Mountain as the nation's repository for spent nuclear fuel and high-level radioactive waste. You don't say where to send these comments, nor give your fax or E-mail coordinates, so I'll use U.S. mail.

This will also enable me to enclose, for more than its historic interest, a copy (I'm sorry it's the best one I can reproduce) of comments I submitted to the Interagency Review Group on Nuclear Waste Management on 10 December 1978. Also attached for your convenience is the 1977 *George Washington Law Review* article that it cites.

I am sending you such old material to emphasize that after devoting 20 years and over \$6.7 billion, as you describe, to trying to figure out how to discharge the responsibility DOE took on itself in an effort to remove nuclear waste management as an issue inhibiting the expansion of civilian nuclear power, only the details have changed. The basic issues and uncertainties remain essentially as I described them to your predecessors 23 years ago. So do the underlying institutional goals and habits of your office. And so, therefore, does the resulting perceived political illegitimacy of the effort you direct, and hence the continued likelihood of opposition by Nevada and harm to DOE's reputation.

I will not waste your time or mine by reviewing the technical issues raised by independent scientists about the suitability of the Yucca Mountain site, e.g. as regards the presence and movement of water. Your office has devoted considerable and skilful effort to bypassing such concerns by means stopping just short of a serious risk of adverse judicial review. Rather, therefore, than answering the legalistically framed questions you suggest, I will answer the question you should have asked, namely how your Department should address the nuclear waste problem.

As a student of your Department since before it began (back to AEC days) and an advisor to previous Secretaries, I believe the problem of nuclear waste management is only superficially a technical problem. It is at root an ethical and political problem that cannot be resolved by technical means. To be sure, the least unsatisfactory method of dealing with wastes already created will need to be found. (I can't suggest what it is because I

don't know.) But no matter what that method is, the problem will remain *politically* insoluble so long as your Department continues to assume and promote the indefinite expansion of nuclear power. That's because this attitude makes you ask host communities to accept, not the responsible deposit of a defined and limited amount of waste, but rather an open-ended commitment to potentially *unlimited* (or purely site-limited) amounts of waste. That is a much bigger request, and much less likely to be freely granted.

In fact, nuclear power has already died of an incurable attack of market forces, as summarized in the enclosed opening presentation to the Nuclear Control Institute's 9 April 2001 symposium in Washington. If your Department would acknowledge this fact, the nuclear waste problem would at a stroke become, if not straightforward, at least potentially soluble in the political sphere (as would the proliferation problem too). However, such an acknowledgment would contradict the currently prevailing nuclear theology. You thus labor under an internal contradiction: the assumption that nuclear power must and will continue to expand makes it politically unexpandable. So long as that contradiction persists, your task will continue to be impossible.

This is not a new issue for DOE. When I was serving on its Energy Research Advisory Board in 1980-81, we were presented with AVLIS and some other advanced enrichment technologies and asked to recommend which to fund. I replied, and asked ERAB's record to show, that DOE should fund *none* of them—not only because of serious proliferation concerns, but also, more fundamentally, because the collapse of nuclear orders, already well underway worldwide, meant that there would be no market for the SWUs proposed to be built, so the money would be wasted. That message was ignored and a lot of money (in ten figures, as I recall) was duly wasted. This is a standard DOE behavior pattern, decades old and not about to change.

In short, the key to solving the nuclear waste problem is a sound national energy policy, based on a balanced, least-cost portfolio of demand- and supply-side investments. (One illustration is described in the enclosed *Foreign Affairs* article from the July/August 2001 issue; an extensively annotated version is posted at www.rmi.org.) However, we are currently far from this statutorily required goal and are indeed running hard in the other direction. I hope that in due course, the Secretary will see fit to take wider advice that can help him and our country out of this pickle. If so, I'd be glad to help.

Sincerely,



Amory B. Lovins
CEO (Research)

Amory Lovins, a MacArthur Fellow and consultant physicist, has advised the energy and other industries for three decades as well as the Departments of Energy and Defense. Published in 27 books and hundreds of papers, his work has been recognized by the "Alternative Nobel," Onassis, Nissan, Shingo, and Mitchell Prizes, the Happold Medal, and the Heinz, Lindbergh, Hero for the Planet, and World Technology Awards. The Lovinses founded and lead Rocky Mountain Institute (www.rmi.org), an independent, market-oriented, nonprofit applied research center, which spun off E SOURCE (www.esource.com) in 1992 and Hypercar, Inc. (www.hypercar.com), which he chairs, in 1999. His latest book is *Natural Capitalism* (1999, www.natcap.org).