



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

November 2, 1990

The Honorable Fred Upton
United States House of Representatives
Washington, DC 20515

Dear Congressman Upton:

I am responding to your September 10, 1990, letter to Mr. Dennis Rathbun, which forwards a concern of Mr. George Minert of South Haven, Michigan. In his letter to you, Mr. Minert asked whether the disposal of low-level radioactive waste (LLW) in worked-out uranium mines has ever been investigated.

Mined cavities, which could include abandoned uranium mines, were investigated by the U.S. Nuclear Regulatory Commission (NRC) in developing health and safety regulations for LLW. In a report entitled "Evaluation of Alternative Methods for the Disposal of Low-Level Radioactive Wastes," (NUREG/CR-0680 enclosed), an NRC contractor examined various methods of LLW disposal, including shallow land burial, abandoned mines, new mines, ocean dumping, and disposal in engineered structures among others. Technical, sociopolitical, and economic factors were examined and assigned weights for each of the alternatives. Near-surface disposal was found to be a more favorable alternative. Mined cavities were also found to be viable, but somewhat less favorable, given the evaluation factors used. Finding suitable abandoned mines is also difficult. Transportation of the wastes dominated the comparison among alternatives, through both cost and safety considerations. Thus, regional disposal sites near the sources of the waste were found to be highly desirable. The biggest disadvantage of abandoned mines in the Western U.S., where most uranium mines are, was transportation costs. A full description of the analysis for each of the alternatives can be found in the report. Table 4.5 on page 110 contains a summary of the results.

As a result of this study, NRC promulgated regulations in 10 CFR Part 61 (copy enclosed), which apply to any method of land disposal. Section 61.7(a)(1) of Part 61 indicates that while the technical requirements of Part 61 Subpart are specific to near-surface land-disposal (within the uppermost portion of the earth, approximately 30 meters) the requirements may be adequate for disposal at depths greater than 30 meters. Where the technical requirements for near surface disposal are not applicable for burial at greater depths, sections of Part 61 Subpart D have been reserved for regulation concerning alternate methods of land disposal.

NRC has no direct role in selecting the actual disposal methods or sites for LLW. That responsibility has been assigned to the States under the Low-Level Radioactive Waste Policy Amendments Act (LLRWPA) of 1985. The States consider a number of factors in selecting a particular site and method for disposal including cost, public acceptance, performance of the site in protecting the public health

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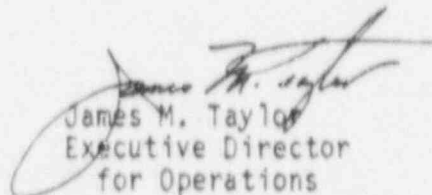
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and safety, licensability, and availability of a particular type of site within the State. Thus far, given all these considerations, States have chosen to focus on near-surface disposal techniques, even though other land-disposal methods could be licensed by NRC. Only one State, New York, is investigating a mined cavity (not a uranium mine) at this time.

I trust I have responded to your constituent's concern.

Sincerely,



James M. Taylor
Executive Director
for Operations

Enclosures:

1. NUREG/CR-0680
2. 10 CFR Part 61

NUREG/CR-0680
FBCU-209-03
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EVALUATION OF ALTERNATIVE METHODS FOR THE DISPOSAL
OF LOW-LEVEL RADIOACTIVE WASTES

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