



"Matt..Richards"@fakeaddress.net on 09/17/2001 11:38:06 AM

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September 17, 2001 11:38:06

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 ---> Commentors Name: Mr. Matt Richards PhD  
 ---> Organization:  
 ---> Position:

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 ---> The Commentors Address:  
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 ---> position :

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 --> Comment Text :  
 After reviewing the Yucca Mountain Science and Engineering Report (DOE/RW-0539), I agree with Dept. of Energy's conclusion that direct disposal of unprocessed, spent nuclear fuel from commercial fuel poses no credible radiological risks. The proposed repository and canister designs should satisfy all EPA and NRC requirements. However, I do have a problem with how certain human-intrusion scenarios have been evaluated. In my view, the greatest future risks from the repository would result from groups that intentionally retrieve canisters from the repository, possibly within just a few hundred to few thousand years after closure. Keep in mind the following facts. Permanent safeguards for the repository cannot be guaranteed. Recovery of a canister(s) does not pose a tremendous technical challenge. Each canister contains sufficient weapons-usable plutonium for several nuclear weapons. After a few hundred years, the radiation levels have greatly decreased and pose little resistance to proliferation (i.e.,

This "plutonium mine" scenario is a distinct possibility with potentially enormous adverse consequences, but is not addressed in DOE/RW-0539. The solution is chemical separation of the plutonium followed by deep burning of

the plutonium in a once-through fuel cycle, which can be accomplished using coated-particle fuel and gas-cooled reactors. This strategy, "Disposition of Spent Nuclear Fuel Using the Modular Helium Reactor," is described in detail in Energy, The International Journal, Vol. 21, No. 4, pp. 333-341.

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