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U.S. House of Representatives
Committee on Energy and Commerce
Washington, DC 20515–6115

W.J. "BILLY" TAUZIN, LOUISIANA,
CHAIRMAN

April 22, 2002

Dr. Jared L. Cohon
Chairman
Nuclear Waste Technical Review Board
Suite 1300
2300 Clarendon Boulevard
Arlington, VA 22201

Dear Dr. Cohon:

I am writing to thank you for appearing before the Subcommittee on Energy and Air Quality on April 18, 2002, to present testimony on President's recommendation to develop a nuclear waste repository at Yucca Mountain, Nevada. Your testimony allowed the Subcommittee's Members to gain a better understanding of this extremely important issue.

Pursuant to the Chair's order of April 18, 2002, the record of the Subcommittee's hearing remains open to permit Members to submit questions to witnesses in writing. Attached you will find questions submitted by Members of the Subcommittee. I would appreciate it if you could respond to these questions in writing no later than the close of business on May 17, 2002, in order to facilitate the printing of the hearing record.

Thank you again for your time and effort in preparing and delivering testimony before the Subcommittee.

Sincerely,

Joe Barton
Chairman
Subcommittee on Energy and Air Quality

Attachment

Questions from Congressman Ed Markey:

1. In addition to the Nuclear Waste Technical Review Board (NWTRB), the International Atomic Energy Agency/Nuclear Energy Agency has reviewed the scientific and technical work of the DOE. They state in their review that "In general, the level of understanding of the hydro-geology of the site... is low, unclear and insufficient to support an assessment of the realistic performance." They continue "Until these questions are answered, it is not possible to develop a realistic conceptual model of the site, or to build a probabilistic saturated zone local model." Do you agree with their assessment? Is the DOE's model unrealistic because of lack of data and basic understanding of physical processes?

2. The DOE is relying heavily on the ability of the canisters to withstand corrosion and contain the radioactive waste for long periods of time. The NWTRB report states that essentially no corrosion data exists for conditions above 275 degrees (120 C), despite the fact the repository could reach temperatures as high as 350 degrees (165 C). In your opinion, can the DOE make any real assessment of the engineered barriers above 275 degrees? What are some of the effects that elevated temperatures could have on the canisters?

3. The DOE only has 2 years of corrosion data for alloy 22 based canisters, yet they are extrapolating this data to 10,000 years. Is this acceptable? Is there currently anyway to adequately determine the integrity of these canisters 10,000 years in the future?

4. The Chlorine –36 "fingerprints" of above ground nuclear testing have been found in the interior of Yucca Mountain, suggesting that water from the surface can migrate 1000 feet to the repository level of the mountain within 50 years. What are the implications of this data for contamination of the ground water below the repository? What are the implications for corrosion of the canisters?

5. Secretary Abraham said in his testimony that Yucca Mountain will meet the EPA radiological exposure standard. But the NWTRB report notes that DOE has not published updated calculations of radiological doses based on the recent travel time estimates. Is the Secretary's statement premature? Can DOE be confident that Yucca Mountain will meet the EPA's standard without having completed these calculations?

6. Spent fuel – uranium dioxide – will be the majority of the stored waste in Yucca Mountain. What will happen to the fuel rods as they sit in the repository? Will they rust? Has the DOE considered the effect of rusting in their assessment of Yucca Mountain and containment of the radioactive waste?

Questions from Congressman George Radanovich:

1. Would you agree with the statement "Geologic isolation cannot and will not play any significant role at the Yucca Mountain repository?"

2. What is the NWTRB opinion of the ability of the man-made containers to meet the NRC and EPA standards for radioactive release into the environment?