

# EPA challenged over health risks at nuclear dump

## Critic emphasizes different aspect of repository's hazards

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Jacob Paz talks Thursday about the Energy Department's reluctance to conduct health risk studies for the Yucca Mountain repository. Paz was an industrial hygienist for a Nevada Test Site contractor. Photo by [Clint Karlsen](#).

As an outsider looking in, Jacob Paz believes he is calling the Department of Energy's bluff on its assessment of health risks for its plans to bury nuclear waste in Yucca Mountain.

For five years, in a barrage of written comments, e-mail messages, conversations and public testimony, Paz has told Yucca Mountain Project officials his view of the plan to move the nation's nuclear waste 100 miles northwest of Las Vegas.

In a nutshell, he is convinced DOE hasn't done its homework on the possibility that toxic chromium from corroding metal canisters will pollute Nevada's drinking water long after the repository closes. That would result in an even more lethal, cancer-causing brew than if radioactive remnants seeped out alone.

"If I'm right, I'm right. If I'm wrong, I'm wrong. But they have to do the research," Paz, said Thursday at his apartment off a West Charleston Boulevard side street.

"They are required by law to report all of the adverse effects on the environment," he said.

Paz's point was picked up in court papers that Nevada filed against DOE two years ago in a federal appeals court.

The papers, in challenging Environmental Protection Agency health standards, state among other things that DOE failed to assess all of the effects of burying tens of thousands of tons of spent fuel. That includes effects from hazardous metals that DOE is relying on to contain the waste.

When the three-judge panel issued its ruling July 9, the state's challenge of the EPA health standard was its only victory. In terms of just radioactivity, the court acknowledged that, when peak doses occur at roughly 300,000 years, a person at the repository's boundary would receive a dose at least 60 times greater than under the EPA's 10,000-year guideline.

That bothers Paz, who believes the cancer-causing effects of metals in a bath of nuclear-tainted groundwater will be unacceptable under EPA's current guidelines for chemical mixtures.

Paz came to Nevada in 1989 to work as an industrial hygienist for a Nevada Test Site contractor. He said he resigned in 1991 out of frustration and incompatibility with officials outside of his division.

He was among safety specialists who realized early on that certain minerals in the mountain, if disturbed by tunnel drilling, could result in lung ailments that affect some tunnel workers.

Now he is adamant that, if the EPA health standard is extended for a much longer, 300,000-year period, as the appeals court suggests, his argument about heavy metals holds even more weight.

Even at 10,000 years, those health risks need to be thoroughly studied, he said.

When DOE officials say the slow degradation of the waste canisters would only result in a minuscule problem, Paz's gut reaction is, "Baloney."

"They don't have a large study to support their position. They don't have the data to support it," he said.

Abe Van Luik, senior policy adviser for DOE's Office of Repository Development in Las Vegas, insists the release rate of radionuclides and toxic metals in 10,000 years will be "extremely low."

"Even at peak dose time, we're still not looking at issues that would cause anybody to worry," he said.

Paz himself offered to do the research for calculating the effects of more than 100,000 tons of heavy metals mixing with radioactive waste. Paz says he has the resume to do it.

Forty years ago, the Israeli native was an employee of the Israel Atomic Energy Commission. In 1966, he came to the United States and eventually earned a degree in chemistry from the Jewish Theological Seminary in New York City. Later, he pursued a master's degree in marine science and the environment at another New York college.

He went on to earn a doctorate in 1984 in philosophy, specializing in environmental health science at Polytechnic University of New York.

After a two-year stint with the federal Occupational Safety and Health Administration, he went to work as an industrial hygienist for a contractor at the Nevada Test Site.

Van Luik said DOE turned down Paz's health risk study proposal, not because he needed more qualifications for the job, but because it would challenge EPA regulations and probably the standard that the U.S. Court of Appeals District of Columbia Circuit now questions.

Van Luik said to calculate health risks from the combined effects of heavy metals and radioactive materials when there is no requirement to do so would be "like challenging the speed limit."

"We looked at the concentrations coming down and showed what EPA believes is not going to be an issue," Van Luik said.

Nevertheless, an EPA official who spoke on condition of anonymity said it's not out of the question that the issue Paz raises eventually might have to be addressed after DOE officials apply for a license for the repository from the Nuclear Regulatory Commission. They expect to submit an application by the end of this year.

The EPA official said it's unlikely that legal questions about the 10,000-year standard will prompt the Energy Department to conduct a study as Paz has suggested.

"Our standards don't address details on any specific factors or how DOE should analyze them. That would be dictated through the licensing process," the EPA official said.

Though he has no stake in the project other than as a private citizen, Paz is motivated to get involved because of his roots in academia and his knowledge of health and safety issues.

When Paz learned last month that some of his comments about the Yucca Mountain Project were missing from the millions of public documents that DOE put in an on-line network for licensing review, he sought help from a statewide environmental group, Citizen Alert.

Peggy Maze Johnson, Citizen Alert's executive director, has joined Nevada in filing a complaint with the Nuclear Regulatory Commission asserting that more than 3 million pages of public comments and research documents can't be found in the Licensing Support Network, including those from Paz.

"They claim to have 4 million to 6 million documents, and they've only got 1.4 million," Maze Johnson said.

She asked, "Are they pulling out only what they think they want us to hear" for inclusion in the network?

When DOE's Van Luik was asked specifically about Paz's comments not being transferred to the Licensing Support Network, Van Luik said, "There's a good explanation for that. Per the regulation, it is not relevant for our license application."

Paz sees it differently. "This is a very serious deficiency," he said about DOE's reluctance to take up his issue. "They try to find excuses not to do it because it would cause a very big delay."