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BEATRICE CLEMENS (By Mr. Byron Clemens)

MR. CLEMENS: Our baby-sitter stood us up, so Beatrice --

MR. BROWN: You're probably not alone in that.

1... MR. CLEMENS: She drew the long straw. I got the short one. Good evening. Her name is Beatrice Buder Clemens. She lives at 100 Arundel Place, St. Louis, Missouri, 63105, and thank you for the opportunity to voice my concerns. [We know so little about radioactivity. I urge the government to leave the waste generated thus far where it is and cease the formation of additional radioactive waste until our scientists have discovered how to make the waste safe for transportation.]

2... [The hazards posed by exposure to radioactivity become more clear all the time. Just within the last 10 years scientists have been able to better define the threat. Articles have appeared in numerous publications including the American Nuclear Society's Nuclear News, the New York Times, New Scientist and the top scientific journal in England, Nature. The main hazard I wish to highlight in this brief comment period is explained in depth in the February 20th, '92 edition of Nature Magazine. The process I refer to is called radiation-induced genomic instability which I will attempt to explain here.

The headlines read: "Radiation may damage DNA without hitting a cell." "Radiation Roulette," and "Alpha Particle After Effects." These reports are based in part on research done at Los Alamos. The unthinkable, but not impossible transportation accident would expose people to plutonium and therefore alpha particles. How you can know the power of alpha radiation and even consider moving radioactive waste around the country is beyond me.

For those outside of the DOE who may not have followed these studies, let me paraphrase them. Prior to the '90s scientists identified three possible effects of exposure to radiation: One, the cell is unharmed; two, the cell is killed; three, the cell's DNA is damaged. The fourth possibility is this radiation-induced genomic instability, meaning that the damage to the cell does not show up until after the cell has divided several times. In other words, alpha particles emitted by radioactive plutonium have been known at least since 1992 to cause abnormalities in some cells several generations of cell division after the initial exposure. This is different from the immediate genetic damage. Again, this delayed mutation effect can show up in cells thought to be undamaged by initial radiation. Suddenly diseases that show up years after exposure have a plausible and direct explanation.

Previously much data on disease clusters was discounted as improbable, indirect or irrelevant. One of the articles I read suggested birth defects, cancers immunity disorders as well as brain disorders such as Alzheimer's and Parkinson disease could conceivably be explained using this newly discovered effect of radioactivity. Quite a list. Perhaps the next decade will uncover half a dozen other ways that radioactivity can kill us.

For instance, there is evidence that DNA of cells nearby to those exposed sometimes show damage. The previous assumptions were that damage was limited to only the cells directly and immediately irradiated. Because you funded some of this research, you already know that disease can appear much after an individual is exposed or even later in an individual's offspring.

The logical next step is for you to change your models for acceptable exposure. This must occur before moving your radioactive waste around. Even better would be to cease production of this unbelievably hazardous material. Radiation is invisible and in some ways still mysterious, but this much has been said, quoting Bruce Lehnert of the Los Alamos Cell and Molecular Biology Group in September, 1997,

2 cont. American Nuclear Society's Nuclear News, "Current models upon which environmental standards for exposure are derived now require serious reconsideration."

In 1995 30 radiobiologists and health specialists throughout the world gathered in Helsinki for a workshop on public health aspects of radiation-induced genomic instability. They cite 26 studies which, they say, suggest that the accepted rules about how to calculate biological impacts of radiation should be rewritten. "Genomic instability changes our way of thinking about how radiation damages cells" --

MR. BROWN: One minute left.

1 cont. MR. CLEMENS: Almost done. -- "and produces mutations," said Jack Little, Professor of radiobiology at the Harvard School of Public Health in Boston who attended the Helsinki workshop. The time will come when you can dismiss the scientists no longer; when the billions of dollars gone subsidizing the nuclear power industry will make sense no longer, not even to the DOE or its contractors. Moving radioactive waste around is not the answer. You will not be burying the problem in the sands of Yucca Mountain, but only your heads. Even if the transportation were to be achieved without incident, the radioactivity will only be moved, not removed. I am not a scientist; I am an accountant. Listen to all of the scientists, particularly independent ones, before it is too late. Thank you.