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OCT 05 1999 

13 MR. KUNZE: Thank you Mr. Chairman, ladies
14 and gentlemen. I appreciate the opportunity to
15 present testimony at these hearings. My name is
16 Jay Kunze and I am the Dean of Engineering at Idaho
17 State University, Pocatello. I am a licensed
18 professional mechanical engineer and a certified
19 health physicist.
20 My nuclear background goes back many
21 years and includes among a number of projects.
22 Serving 11 years as a consultant to one of the
23 largest nuclear utilities and one of the largest
24 nuclear power plants at Callaway Nuclear Power
25 Plant of Union Electric in Missouri. I would like

1 to offer to emphasize the comments I will make
2 tonight are my own. They do not necessarily
3 represent those of Idaho State University.
4 A geological repository for Idaho
5 nuclear waste has been proposed for a number of
6 years. It goes way back. Most of the rest of the
7 nations of the world involved in generating nuclear
8 power for commercial applications aren't choosing
9 this route.
4 10 The United States had originally
11 proposed this and of course is proceeding with the
12 Yucca Mountain Project. It is a sensible and
13 desirable method of disposing of these small
14 amounts of waste. I consider them small amounts
15 because when you compare the nuclear waste volume
16 with the waste volumes coming from conventional
17 methods of generating electricity there is a huge
18 difference. Many, many orders of magnitude
19 difference.
20 The DOE's plan is, in my opinion,
21 realistic, practical. I wish it could be
22 accomplished in a faster time scale than the
23 projected earliest start date of the year 2010,
24 however.
25 Three specific comments I would make

1... 1 relative to the draft EIS. First, retrievable
2 storage of this site; used nuclear fuel in the form
3 of used fuel subways is essential. It must be
5... 4 retrievable. We in the United States have chosen a
5 course of action, which is entirely different from
6 that of the other countries in the world of major
7 users of nuclear energy.
8 We have chosen to throw away 93 percent
9 of the useable energy in those fuels. They have
10 only extracted from them 7 percent of the available
11 energy. I consider this a terrible waste of energy
12 resources.
13 Now, at the present state we have
14 abundance supplies of uranium at low cost in the
15 ground in the United States. So at this time it
16 does not make sense to economically to reprocess
17 the fuel. Despite the fact that the government has
18 taken the position that it will not be reprocessed
19 regardless of economics.
20 To waste 93 percent of the energy is
21 profligate. The DOE has proposed that the fuel
22 will be restored economically in a retrievable
23 fashion for anywhere from 50 to 100, I guess, 300
24 years.
25 I encourage them to make this process

5 cont. 1 easily retrievable because it's my opinion that the
2 United States will come to its senses in the next
3 10 or 20 years and realize that this fuel needs to
4 be reprocessed. There is a big advantage for Yucca
5 Mountain by doing this because it would extend the
6 volume. It would extend the lifetime of Yucca
7 Mountain by reducing the volume of the waste,
8 extend the lifetime of Yucca two to five times
9 beyond what you are now projecting forward.
2... 10 Item number two, DOE should give very
11 serious consideration in its final draft,
12 Environmental Impact Statement, revisions to the
13 current draft. I am sorry. For its final impact
14 statement. Serious attention to the impaired,
15 correct paradigm of the health effects of low-
16 level radiation.
17 This is a change in paradigm which has
18 developed over the past 20 years. It is not yet
19 fully accepted by those who have been taught
20 throughout the last four years the linear, no-
21 threshold concept or hypothesis for the effects of
22 radiation on health of individuals. The linear,
23 no-threshold hypothesis is blatantly false.
24 It is a unfortunate that we adopted this
25 from a safety viewpoint whenever we had no better

2 cont.

information. Nobody knew at that time what the true effects were on the human body of low levels of radiation. Now there are over 2000 references available, which show that actually low levels of radiation up to 30 times what we get from normal background are actually beneficial to our health.

I believe it is important for DOE to address this aspect because by giving the true paradigm of the effects of low-level radiation on the human body, it will negate the irrational fear that has been developed by the press and the public of the effects of radiation. I sincerely hope that DOE will seriously look at this. There are many, many references available even from the health physics society which you would think has the best at interest in showing the radiation is harmful. It is not at low levels. It is beneficial.

6...

My third point is DOE has responsibility in regard to utilities. Utilities, we are expecting that this fuel will begin to be taken prominent and possessed by the DOE for disposal in January of 1998. The DOE could not honor this commitment. That is unfortunate but perhaps due to no real fault with the DOE; it is just circumstances that have developed. However, the

6 cont.

utilities have donated to this fund paid by their customers 16 billion dollars including interest of which only a fraction of which has been spent on the Yucca Mountain Project.

3...

The utilities are facing many increased costs to expand their facilities or storage of fuel or modify their facilities for much longer periods of time. I think it is only fair in the interest of the payments that have been made from these utilities that the DOE go in partnership with utilities and help the utilities in preparing to store this fuel for another 11 to 12 or perhaps 40 years until the Yucca Mountain is prepared.

1 cont.

3 cont.

2 cont.

In summary, to prepare a plan for the Yucca Mountain Project is silent. However, I do feel that special attention needs to be given to make sure that the storage is easily retrievable and that there is fiscal fairness in regard to utilities' extra expense that they are incurring. And finally to give immediate attention and careful attention to the true effects of low-level radiation, and incorporate these into the risk estimates that have been made in the EIS, and bring to the end this very irrational fear of both the press and the public of low levels of radiation.

Thank you.

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