



N A R U C
National Association of Regulatory Utility Commissioners

September 15, 2000

Mr. E. William Brach
Office of Nuclear Material Safety and Safeguards
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: Spent Fuel Risk Estimates Brochure

Dear Mr. Brach:

The National Association of Regulatory Utility Commissioners (NARUC) maintains an active interest in the transportation of spent nuclear fuel since safe shipment of spent fuel from reactor-site storage is necessary to remove the material to either interim storage or to the permanent repository. We appreciate the opportunity to participate in the NRC workshop on September 14 on the Package Performance Study and to review and comment on the proposed brochure on spent fuel transportation risk.

We believe there is a great need for an easy-to-read brochure on spent fuel transportation as well as a need for pro-active public education on the subject. While much of the public is simply unaware or perhaps disinterested in this topic, there are others that are aware but may have inaccurate information. A brochure provided by the NRC should help close the knowledge gap. We have attached some suggestions for further improvement, but overall the content seems excellent and understandable.

I have also enclosed the public meeting feedback form. I thought the meeting was well managed and achieved the stated objectives. We would appreciate being added to your mailing list for future meetings.

Sincerely,

Brian O'Connell
Director
Nuclear Waste Program Office

Attachments

**Review Comments of
The National Association of Regulatory Utility Commissioners
On
Discussion Draft
“An Updated View of Spent Fuel
Transportation Risk”**

General

- **Level of Detail**

Excellent and appropriate.
The source document is available for more details.

- **Understandability**

What is there seems understandable, but rather than asking someone who is familiar with the subject, it might be revealing to invite a diverse sample of people unfamiliar with nuclear safety to read the document and have a discussion with them to see how well they understand it.

The quantification of person-rem seems to beg the question “so what?” The public can likely understand dose per person. You could then provide some discussion of the way analyses are made of numbers of people which may be exposed to various dose levels leading to calculations of total dose without complicated use of person-rem as the scalar.

- **Points of Concern Addressed**

See following comment on “why” spent fuel must be transported. We are concerned that many people have forgotten why the Nuclear Waste Policy Act was enacted as the solution to a problem and almost a generation later some see that solution (in this case the implementation of the solution) as the problem. We know there are disagreements on these opposite views, but we feel that conclusion by some that transportation of spent fuel poses too high a risk (whether founded on fact or perceived risk) does not acknowledge that the *indefinite* storage of spent fuel at 77 reactor sites poses an even higher risk over the long term. (We agree that ISFSI storage is safe for its license period.)

- **Overall Tone**

Seems appropriate. We know that the NRC must be cautious in finding the balance on informing the public on nuclear safety without ever being perceived as either being an advocate of transportation of spent fuel. We think you have maintained that objectivity well in the document.

Suggested Improvements

1. You have covered well “what” spent fuel is and “how” it is managed and shipped with what likely consequences, but there are still questions in the public about “why” spent fuel needs to be transported in the first place. The summary makes reference to “greater numbers of shipments per year” in the next 30 years and that the “Nation’s spent fuel will be moved to a repository” but it seems appropriate to say just a little more, certainly not to the degree available in other documents that could be referenced. This could be done by adding, perhaps under **“Background:”**

The Nuclear Waste Policy Act of 1982 set forth the national policy for the federal government to be responsible for safe, permanent disposal of spent nuclear fuel and other high level radioactive waste in a geologic repository to be developed at a suitable site. Currently a site is being evaluated for suitability at Yucca Mountain, Nevada. If found suitable in a decision to be made by the President, the Department of Energy would apply to the Nuclear Regulatory Commission for a license to construct and eventually ship spent fuel for emplacement in the completed repository when it is licensed for operation beginning in 2010 or later. Mode of shipment has yet to be determined. For more information see reference 5.

Since the Department of Energy was required to begin operating a repository and shipping spent fuel to it in 1998 and now will not be able to do so until 2010 at the earliest, some nuclear utilities are considering developing a temporary storage facility in Utah. Many of the utilities have had to add additional spent fuel storage capacity at reactor sites, but some lack the physical space to do that or they have concluded that it is likely more efficient and economical to consolidate spent fuel away from the reactor site at a suitable site pending the availability of the permanent repository. The developer of proposed temporary facility in Utah plans to make shipments by rail except in those locations not immediately served by rail. For further information see reference 6.

The permanent repository could require transportation of 70,000 tons of spent fuel and other high-level waste by the government between 2010 and 2033. The private temporary facility will have the capacity to store 40,000 tons, but the exact amount to be stored will be determined by business decisions of the utilities that elect to store their fuel there or to add reactor site storage capacity. All spent fuel storage, temporary or permanent, will be operated under licenses issued by the NRC.

References:

5. U.S. Department of Energy. 1999. DOE/EIS-0250D. *Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada.*
 6. USNRC. 2000. Docket No. 72-22. *Draft Environmental Impact Statement for an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah*
2. Add a summary of the role of the NRC. Since the document is presumably intended to be a “stand alone” document that will be provided to people outside government or unfamiliar with nuclear materials management, it would seem worthwhile to add, perhaps at the end of the text, a summary of what the NRC is and its role in spent nuclear fuel transportation. It should be clear, for example, that NRC regulates not only the safe transportation of spent fuel by non-government personnel but it also licenses certain operations (e.g. the repository) of the Department of Energy. The public often does not draw the distinction between various federal agencies. The public needs to be assured that there is literally “cradle to grave” nuclear regulation to protect public health and safety.
 3. The table on page 13 with probability, consequence and risk for various scenarios does not seem well explained. Are the data entries merely illustrative? Is there a difference between “person-rem” and “person rem” in the column headings? The risk contribution, measured in person-rem, in the table seems to contradict the last sentence in Section 4 introduction “The radiological risk of the shipments is represented by the sum of all doses to all individuals (in person-rem.) It looks confusing. The “lesson” in the table that 0.00000001 chance with 10 person rem consequence has the same “risk contribution” in person-rem as a 0.00000001 chance with a consequence of 100 can be made in an oral presentation but does not seem to come across well in this display. Can the point be made some other way or does it need to be made at all in this “summary paper?”