



SRS Citizens Advisory Board

Nuclear Materials Management Subcommittee

Meeting Summary

June 30, 1997

Beaufort, S.C.

The Citizens Advisory Board (CAB) Nuclear Materials Management (NMM) Subcommittee held a meeting on Monday, June 30, 6 p.m. at the Best Western, Beaufort, SC. Subcommittee members attending were Tom Costikyan, chairperson, Ken Goad, Brendolyn Jenkins, Mary Elfner and Jimmy Mackey. Savannah River Site resource personnel attending included Donna Martin, Westinghouse Savannah River Company, and Jean Ridley, Associate Designated Deputy Federal Officer, Department of Energy-Savannah River. Members of the public attending were George Minot, Alfred Mowery, Glenn Niemiec, Edie Rodgers and Sammy Svalina.

Introduction

Tom Costikyan said the meeting purpose was to develop a recommendation for DOE on the study scope on nonproliferation implications of various spent nuclear fuel (SNF) treatment technologies for aluminum-based spent nuclear fuel. Before proceeding with that subject, however, Costikyan announced that Ken Goad would serve as the NMM subcommittee vice-chair and present the recommendation to the full CAB on July 22 in his absence.

Background and Discussion

Costikyan explained the subcommittee will develop a recommendation as a result of a request by DOE-HQ seeking public input on the scope of the nonproliferation study. On June 13, Jon Wolstahl, gave a presentation to the subcommittee on the study's proposed scope and outline. In that presentation, Wolstahl said the scope was broadened from original language in the Notice of Intent to cover the nonproliferation implications of all viable SNF treatment technologies, not just chemical processing.

With that background, Costikyan then shared the attached four points as a starting point to develop a recommendation. In addition, the Costikyan suggested the subcommittee review the Notice of Intent published in the Federal Register during recommendation development.

As discussion began, a question was asked on the percentage of enriched uranium meeting international nonproliferation guidelines. Alfred Mowery, Hilton Head citizen and former aid charged with developing nonproliferation policies under President Jimmy Carter, said highly enriched uranium diluted to 20% generally met nonproliferation purposes. Jean Ridley, DOE-SR, said, direct disposal of SNF would still be over 20% and DOE is not sure if the repository will

accept uranium blended down only to 20%. She added DOE is looking at blending down uranium as low as 2%.

Costikyan pointed out the real risks of the highly enriched uranium isn't what the United States will do with the material, rather, it is what rogue countries will do with the material. Costikyan further explained that nonproliferation is a political issue. Those against processing material express concerns on how the separated material is protected and the fact that other countries might claim the right to chemically process spent fuel if the United States chooses to do so.

At this point, Costikyan asked the members to review the third bullet on his list of four discussion points and offer input on dealing with International Atomic Energy Agency (IAEA) safeguards and transparencies.

George Minot, Hilton Head citizen, said the outline presupposes that the United States has a clear policy on nonproliferation, although Minot does not think DOE has ever fully addressed the policy. Minot said the CAB recommendation should include a statement asking DOE to state the nonproliferation policy early in the document. Mowery said President Carter's call to stop processing of fuel in the U.S. was done simply to try and persuade other countries not to reprocess.

Costikyan said DOE was very clear in the Foreign Research Reactor EIS (FRR EIS) Record of Decision that processing SNF in the canyons is a non-preferred activity and would be used only for (1) safety and health reasons and (2) if DOE could not develop a viable new technology by 2000.

Ridley added that she identified the references for the policy statement in the FRR EIS although the document referenced was classified. She understood the U.S. policy as striving to reduce the foreign commerce of HEU.

Meeting attendees agreed a statement in the recommendation should include clearly explaining and clarifying the U.S. nonproliferation policy in reference to managing spent nuclear fuel.

Mowery suggested risk benefits of each technology be included and written in a way that helps the public understand the aspects of each technology. Costikyan said the study will focus on nonproliferation implications and how each treatment may conflict with national policy. Treatment viability is being studied in the SRS SNF EIS.

Jimmy Mackey offered two suggestions to consider in developing the recommendation: (1) DOE should use chemical processing only if other treatments were not viable and (2) DOE should settle transportation issues before sending MOX fuel overseas. Costikyan clarified that the study is only covering highly enriched foreign and domestic research reactor fuel, not other fissile materials such as plutonium. Costikyan further explained that DOE's goal is to convert the spent nuclear fuel through a process which does not result in weapons usable material.

Back to discussion on IAEA inspection, Costikyan said the third bullet basically suggests that the U.S. follow IAEA ground rules but not to the degree of compromising U.S. security.

Brendolyn Jenkins asked if the United States would accept such a suggestion from another country. Mackey added that it appears people in other countries have a different idea of nonproliferation. Ridley said there has been some discussion among DOE to allow inspection of a technology process at certain stages so that security is not jeopardized. She also said the Nuclear Regulatory Commission (NRC) is the link with the IAEA for non-American oversight of nuclear facilities.

Sammy Svalina, Beaufort citizen, said DOE should study each technology completely, identify all the proliferation risks within the process, identify the amount of product remaining and provide a summary for the public. Jenkins agreed with Svalina's suggestion that DOE provide a tally of each technology a specified number of rods, for example.

Costikyan said DOE has committed to evaluating all eight viable technologies as a result of the increase in scope. Costikyan added, however, chemical processing is the only treatment that includes one vulnerable step of separating waste from the weapons-usable HEU, even though it could be blended down to non-weapons usable material.

Concerning IAEA oversight of processing, Mowery said declared weapons states such as the United States and Russia, are not subject to IAEA inspections with the exception of cameras that count SNF in the basins. Costikyan added the danger is which countries can be trusted to declare weapons processes. Mowery emphasized the technique for separating weapons usable material is a simple chemical process which could be done easily by terrorists. All agreed wording on international inspection should be included in the recommendation.

Next, Costikyan asked the subcommittee to decide whether a statement on the uncertainty of Yucca Mountain waste criteria should be included. Tom said it would be conceivable that the SNF would be treated, set aside and stored until the repository opens and accepts material.

Beaufort citizen, Edie Rodgers, and George Minot both questioned the reality of Yucca Mountain ever opening. Costikyan said DOE has stressed there will be a repository, adding that it is important for the treatment to meet acceptance criteria. If the material is treated at SRS, then is unacceptable for the repository, DOE and local citizens would have a bigger problem.

Ridley emphasized again to the subcommittee that the nonproliferation study will not identify which treatment is the better option, rather, it will determine proliferation risks existing within each technology. She added that the storage form at Yucca Mountain must be stable and proliferation resistant for a 10,000-year period.

Recommendation Development

After final discussion and clarification, the subcommittee and public attendees agreed a statement endorsing DOE's decision to include a review of all technologies should be included in the recommendation. The statement will also ask that DOE identify ways to mitigate the proliferation disadvantages.

Another suggestion was to ask DOE to include information on the costs associated with maintaining security and safeguards of the treated material, as well as informing the public of the uncertainty factor of identifying costs and scheduling of treatment options.

Conclusion

The attached draft recommendation was developed for subcommittee review and approval prior to presentation to the CAB. Ken Goad, CAB NMM chair, will present the recommendation at the July 22 full board meeting.

In final business, the subcommittee asked that a proposed tour of SRS canyon facilities be held on Monday, July 21. Subcommittee members in Beaufort and Savannah felt the July 21 date was most convenient since they were already taking time from work to attend the July 22 meeting in Aiken.

The subcommittee also scheduled a tentative planning meeting for Thursday, August 21, 6 p.m., Savannah to prepare recommendations for the September CAB meeting.

Meeting handouts may be obtained by calling 1-800-249-8155.