



SRS Citizens Advisory Board

Nuclear Materials Management Subcommittee Meeting

Meeting Summary
September 11, 1996
Beech Island, S.C.

The Citizens Advisory Board (CAB) Nuclear Materials Management (NMM) Subcommittee held a meeting on Wednesday, September 11 at the First Citizens Bank in Beech Island, SC. Subcommittee members attending were Tom Costikyan, chairperson, Brendolyn Jenkins, Ed Tant and Suzanne Matthews. Savannah River Site resource personnel attending included Donna Martin, WSRC, and Jay Bilyeu, Associated Designated Associate Deputy Official, Department of Energy-Savannah River. Other WSRC personnel attending were Gail Jernigan and Rick Geddes. Public attendees were Lee Poe and Bob Newman.

Costikyan opened and said the meeting objective was to weigh options of upcoming nuclear material activities and identify projects for CAB NMM focus. He first addressed the canyon seismic study and posed the question to the subcommittee as to whether the CAB could or should comment on the results of the study.

Canyon Seismic Study

Costikyan said he did not feel a statement of the technical evaluation would be meaningful since the CAB did not possess the technical knowledge to make an endorsement statement. Suzanne Matthews said the CAB NMM subcommittee should at least bring the issue to closure since the subcommittee had requested information and presentations on the subject.

Lee Poe said he understood the CAB looked at the "process" of technical evaluation, not the report itself. He said the CAB NMM had not indicated whether or not they were satisfied with the final report. He further suggested the subcommittee consider the following steps: (1) ask or hire someone to review the HQ study and report back to the subcommittee on the appropriateness of the results (2) Make recommendation that the subcommittee looked (3) Get technical support from someone other than WSRC or DOE to review the study.

Costikyan said the subcommittee looked at the expertise of the team performing the canyon studies and he feel the subcommittee needed additional information. He added that the subcommittee was impressed by the resumes of the canyon study teams and it would be hard to find individuals who could surpass the expertise of the team.

Poe explained he felt the report was not truly independent but rather a DOE review by subcontractors who are paid by DOE. Brendolyn Jenkins said she understood an independent

review had been conducted. Costikyan clarified that the final review was conducted by a different division of DOE.

Matthews added that it would be difficult to even identify two scientists with the same opinion and she agreed having one person perform an additional technical review would likely not be beneficial.

Bob Newman emphasized Poe's point on the difficulty of having a DOE contract conduct an independent review of a DOE project. Additionally, Newman said he had concerns the review teams did not look at procedures.

Costikyan then asked for the subcommittee's opinion of initiating additional reviews on the seismic study. Rick Geddes said most of the safety and procedural issues were addressed in a readiness review required to start up the canyon. Costikyan then replied to Newman that the subcommittee would not address technical questions.

Matthews said although the study never had a true independent review, it would be difficult to find a technical reviewer of the caliber of the various review teams. Since the report is completed, she added, the subcommittee should bring the issue to closure.

Poe commented an independent review would be another iteration of the review and allow the CAB to say whether or not the study was conducted satisfactorily. At that point, support of the study by the CAB would be valid. He added, DOE would probably consider it important for the CAB to endorse the study.

Costikyan said he did not think hiring an independent technical advisor for the canyon study would be an efficient use of the Board's time and money. Newman said it was the CAB's responsibility to give DOE advice. Costikyan responded that having a technical background is not a pre-requisite to a member of the Board.

The subcommittee concluded the seismic study discussion by choosing to give the basic findings of the report to the CAB.

Projects for CAB NMM consideration

Costikyan said the subcommittee could consider several upcoming activities which fall within the CAB NMM subcommittee scope. Suggestions included

(1) How will spent nuclear fuel at SRS be treated?

- Costikyan noted the issue was timely, then added the governor of South Carolina had objected bringing foreign spent nuclear fuel to SRS

(2) What should be done with material at other sites?

- Should nuclear materials be brought to SRS and stabilized?

(3) What are the nuclear material aspects of the Ten-Year Plan?

Matthews suggested commercial spent fuel storage and processing be considered as a future topic.

Poe said the subcommittee should accept an offer by DOE manager Carl Everatt for a presentation on the treatment and storage alternatives for aluminum-based spent nuclear fuel. Near term plans for a privatization of new spent nuclear fuel facility should also be considered, he added. Poe continued that the most important issue the subcommittee should address is how DOE will prepare material near-term for long term disposal.

Rick Geddes said there was validity in not specifying a storage technology now because DOE does not know the storage criteria for disposal.

As discussion turned to the upcoming site specific spent nuclear fuel EIS, Jenkins asked if the study would determine the way the fuel will be stored. Geddes said one of the alternatives in the EIS will be no action—continued storage in water filled basins. The other alternatives will include alternative technologies studied by DOE in the technical strategy report and chemical separation.

Costikyan said he had concerns with privatization as a potential subject, which he felt was more of a philosophical issue. Bilyeu said DOE takes a strong position that the commercial industry could build the SNF facility more efficiently.

Costikyan added that one subcommittee member asked if DOE would address the Bacon-Davis Act in privatization efforts.

Nuclear Materials Stabilization

Preparing nuclear materials for final disposition was then discussed. Geddes said that issue raises the questions of how disposable is the material and what DOE is doing to meet disposal criteria. A statement from the Nuclear Regulatory Commission and the Environmental Protection Agency on waste criteria might be worth pursuing, he added.

Jenkins asked if it would be possible for DOE to prepare spent fuel for disposal yet not meet disposal criteria.

Poe said DOE believes all of the alternative technologies being researched for aluminum-clad fuel will meet NRC criteria. Geddes added the CAB may want DOE to request disposal criteria requirements in writing.

Jenkins stressed concern that any current stabilization method might be futile. Newman added the variables involved in identifying disposal criteria dictate a need for some specific criteria now.

Poe said DOE could continue with the SNF EIS process and look at other technologies although one technology—processing and placing material in glass—does meet disposal criteria.

Geddes said, however, the statement that processing meets disposal criteria a bit too optimistic although placing processed material in glass is generally expected to be acceptable for geologic disposal.

Costikyan asked if there would be merit in leaving the spent nuclear fuel in wet storage for an extended amount of time while NRC determines the acceptance criteria. Jenkins asked why spent fuel was placed in wet storage.

Geddes explained wet storage was the system used by the United States for radioactive shielding and to reduce the temperature of the thermally hot spent fuel rods. The wet storage method was intended for short term storage only. As storage of the spent fuel extended well beyond the expected time, water quality deteriorated and the aluminum-clad fuel began to corrode.

Recently, however, Geddes pointed out water in the reactor basins have been upgraded to allow longer storage of aluminum fuel with no risk of corrosion. Geddes added the upgrade of water quality is now equivalent to water quality in the Receiving Basin for Offsite Fuel, a basin that has been used to store domestic and foreign research reactor fuel since the 1960s.

In response to a question on continued storage in the basins, Geddes said water storage provides shielding, ease of operation and experience by SRS personnel. The no action alternative (long-term wet storage) would require more people to manage the fuel and higher costs to maintain the fuel in water basins. He added SRS's goal is to store the fuel on an interim basis only.

Jenkins asked if any mandate existed that states the SRS spent fuel will definitely go to a geologic repository and when it would open. Geddes said the repository was slated to open in 2019 and store 85 metric tons of waste, with the majority being commercial spent fuel and the remaining allocated for high-level waste borosilicate logs. DOE's general counsel interpretation of the law indicates DOE spent fuel will also be accepted, Geddes added.

In discussion on the opening of a geologic repository at Yucca Mountain, Poe said he felt chances are slim as did many experts. Geddes said although the EIS process for Yucca Mountain had been put on hold for almost a year, the process has been revived.

Rocky Flats Plutonium Residue EIS

Next on the agenda, the subcommittee discussed the potential of shipping Rocky Flats plutonium residues to SRS as mentioned in the SRS Ten Year Plan and the pending Rocky Flats EIS.

Costikyan said questions that come to mind include: (1) Is the amount of material significant? (2) Is this a bad time politically to consider sending material to SRS for stabilization?

Jay Bilyeu, DOE, said cost savings to DOE is one advantage of shipping material to SRS for stabilization. The Rocky Flats material would add 10 additional pounds of plutonium to SRS's existing 10 tons of plutonium.

Costikyan said the CAB could potentially take a position on whether or not the Rocky Flats materials should be sent to SRS. Poe added once the material is stabilized, it could be safely

stored for the next 50 years. It would bring a restriction, however, of keeping an operating facility available to stabilize materials.

Other potential CAB efforts could be to find out if citizens think Rocky Flats material should come to SRS or go to other facilities, Geddes said. He explained it is more cost effective for DOE to build one large storage facility than several at other facilities. Geddes added that SRS is the only plutonium handling facility in the DOE complex still operating.

Jenkins said it would be beneficial for the CAB to make a list of the positives and negatives of plutonium storage and stabilization at SRS and make the list available to the public. She insisted public perception is the most negative impact with the problem being the message and the messenger. Showing a simple comparison of negatives versus positives would be a good way to provide information to the man in the street.

Concerning political views, Poe said the governor of South Carolina's position against bringing foreign research reactor fuel to SRS results from DOE's failure to make a commitment on keeping the canyons operating to stabilize material and to eventually move the fuel out of South Carolina. Costikyan added the media has given the governor's position top coverage.

Ten Year Plan/Canyon Deactivation

The subcommittee then began asking questions on canyon operations. Poe said under the Ten Year Plan, DOE-SR is recommending to deactivate the F and H Canyons. The CAB may want to ask if deactivation of the canyons is logical or should canyon operations be extended.

Costikyan asked Geddes to explain the history of canyon operations. Geddes said plutonium was generally processed and stabilized in F Canyon while spent nuclear fuel was recycled in H Canyon. He explained that under the Ten Year Plan, DOE would make H Canyon inoperable within the 10-year window, followed by F Canyon a year or two later. He added costs would be too high to keep canyons operating if SRS does not bring in new missions.

In reference to new missions, Matthews suggested the subcommittee should look even beyond the 10 or 20 year window and consider addressing the International Thermonuclear Experimental Reactor (ITER) project. Matthews provided handouts and explained ITER is the world's largest research program that she feels should be constructed at SRS. Matthews added that the ITER would bring \$10 billion for SRS.

Poe said ITER dealt with nuclear materials and he saw no reason why it could not be addressed by the CAB.

Costikyan cautioned that in his opinion, the ITER was outside the scope of the subcommittee and the full CAB.

Discussion then concentrated on selecting actual topics for NMM focus. One recommendation included hearing a presentation on the Nuclear Material Management aspects of the Ten Year Plan, possibly on the afternoon prior to the full Board meeting on September 23.

Costikyan said he preferred not to address the privatization issue. Geddes said the CAB may want to ask about differences in the Ten Year Plan from other DOE plans (the Five Year Plan for example).

Poe suggested the CAB consider benefits and costs of early deactivation of facilities, intersite storage and stabilization and possibly privatization of the SNF facility within the Ten Year Plan. Under facility deinventory, the CAB may consider the safety measures and potential impacts on the community.

Geddes added that in facility deinventory, DOE would spend more money upfront to shut down a facility. In final discussions on the Ten Year Plan, it was noted the draft plan by SRS is the Site's attempt to accomplish cleanup and material stabilization with flat funding over the next 10 years.

CAB Presentation to North Charleston Safety Committee

Ed Tant then asked to discuss conversations he had initiated with elected officials in North Charleston. He explained he approached the officials because he felt transportation of foreign research reactor spent nuclear fuel caused undue fear in the Charleston area.

Tant said he spoke with North Charleston Councilman Michael Whatley about the Keyserling report on potential safety issues with the L Reactor Basin. Whatley, who is on Keyserling's environmental committee, was not aware of the report initiated by Keyserling. Tant provided the report and DOE's response to Whatley.

Tant also talked with the mayor of North Charleston about the shipment of foreign fuel and offered to come to the community, educate them on transportation and management of the spent fuel with the goal of reducing fears. According to Tant, the mayor's primary concern was when the fuel would arrive.

As a result of conversations with the mayor, Tant then talk with Don John Hays, North Charleston Safety Council, and a meeting for a CAB presentation directed at community concerns was suggested.

Costikyan said he was very enthusiastic about the upcoming meeting with the North Charleston Safety Council. All agreed that Monday, October 21 was a suitable date. A tentative agenda could include a summary of CAB activities, an overview of the CAB FRR recommendation, a videotape of spent fuel transportation and questions/answers.

Poe asked if DOE had held any meetings in the Charleston area and if so, it would be beneficial to gather the feedback as the subcommittee prepares its overview.

Jenkins asked if a technical person would be available to answer questions the CAB could not answer. She also said the subcommittee should inform the CAB's public outreach committee about the meeting. CAB member P.K. Smith, who also works at SRS in the spent fuel program, was suggested to be the technical representative.

To prepare for the meeting, Tant said a letter from the CAB should go to the North Augusta mayor. Another suggestion included asking someone to be available to discuss risk involved with spent nuclear fuel.

In closing, the CAB NMM subcommittee decided to take the following short-term actions: (1) Schedule presentations on technology alternatives for aluminum-based spent fuel and NMM aspects of the Ten Year Plan for September 23; (2) Prepare for the October 21 meeting with the North Charleston Safety Council—develop agenda and send letters (3) Participate in the SRS Spent Nuclear Fuel EIS and; (4) Participate in the Rocky Flats Plutonium Residue EIS.