



June 1994 Meeting Minutes

SRS Citizen's Advisory Board

Members Present

All members were present except Myles Grant, Rachael Harper, Ann Loadholt, Mildred McClain, Jo-Ann Nestor, Moses Todd and Pat Tousignant. Mike Sellers of the Department of Energy-Savannah River Operations Office (DOE-SR) sat in as alternate for ex-officio member Tom Heenan. Constance Jones of the Environmental Protection Agency (EPA) sat in for Camilla Warren and Shelly Sherritt of the South Carolina Department of Health and Environmental Control (SCDHEC) sat in for Myra Reece. Ex-officio representative Jeff Crane of EPA was not present.

Key Decisions Made by Board

The CAB decided not to consider a draft resolution presented by Andrew Rea during the May 24 CAB meeting that would have endorsed restoring funding to a DOE-funded cancer and birth defects registry.

Establishment of an SRS Risk Management and Future Use Subcommittee was approved and will report through the Education Subcommittee. Brian Costner was appointed chairman of the SRS Risk Management and Future Use Subcommittee.

CAB members requested that a team from Tulane and Xavier Universities meet on July 25 for briefings on risk assessment and a tour of SRS to allow CAB participation. This meeting is optional. *(The briefings and tour were rescheduled for July 27 at the request of the team)* The Team will also brief the Board on July 26.

The CAB Proposed Budget for Fiscal Year 1995 was approved with two amendments.

The CAB meeting locations will be flexible and can encompass nearby towns.

A motion to change the SRS CAB letterhead failed.

Approval of Minutes

The minutes from the last meeting were approved with several changes. Brian Costner asked for several editorial changes and clarifications to technical presentations. Ann Ragan asked that several clarifying statements be added to the questions and answers of Ken Taylor's (SCDHEC)

presentation on groundwater issues. Andrew Rea stated that the minutes lacked official detail and should very specifically reflect the decisions made by the Board.

Agency Updates

Ann Ragan of SCDHEC reported that the three agencies were very close to resolving a formal dispute over the Federal Facilities Agreement, which is a blueprint of how to remediate the site. She stated that SCDHEC and DOE had signed the schedules but she was uncertain if EPA had signed. She also stated she had an information sheet on fish radiation which included a lot of raw data if anyone wanted a copy. She said she would have this information summarized in a less confusing format.

Mike Sellers of DOE introduced himself as Acting Deputy Assistant Manager for Environmental Restoration and Solid Waste. He also introduced Cynthia Anderson, who is replacing Lew Goidell, as the new Director of the Environmental Restoration Division for DOE-SR.

Constance Jones of EPA introduced herself and stated that John Johnston, the Branch Chief at the Federal Facilities Branch of EPA, sent his thanks to the Board for being progressive and stated this Board is well ahead of all others in their region.

Andrew Rea Resolution

Bob Slay said he had been asked by Andrew Rea to determine through DOE legal counsel if Mr. Rea should excuse himself from consideration of a resolution endorsing restoration of funding to a DOE-funded cancer and birth defects registry, and stated that a copy of a letter from DOE's attorney had been distributed to all Board members. Bob Slay stated he had suggested Mr. Rea leave the room during discussion. Mr. Rea chose to remain.

Brian Costner moved that the issue be resolved next month when the Board was clear on how to approach these kinds of resolutions, since the DOE legal interpretation of this issue is important and sets precedent. He also said if Andrew Rea is not to be allowed to participate, then no one is available to present the resolution. Bill Lawless seconded the motion.

The motion failed with a vote of one in favor, 12 opposed and one abstaining.

Andrew Rea offered several observations: 1) Under the original SRS Charter, the Board is authorized to address related SRS issues and activities; 2) The charter also defines the purpose of the Board as prioritizing key and timely issues of concern. 3) A function of the Board is to determine issues in conjunction with the Board's budget cycle. 4) The Board can serve as an interface with other Boards. He stated that DOE should look immediately at the definition of conflict of interest. He asked for further clarification of consequences of participating in a decision which reflected a conflict of interest.

Bob Slay stated that he was asked by Andrew Rea to pursue an interpretation or clarification from DOE legal counsel regarding the appropriateness of his involvement in the resolution. Mr. Slay also stated that the Board now has one charter that was presented with Assistant Secretary

Tom Grumbly's appointment letter and that Andrew Rea had read from the old charter. Much discussion pursued on the wording of the Grumbly letter and whether the conflict of interest affected many members of the Board.

Bob Slay stated that the issue was whether the resolution was appropriately before the Board. Tom Greene said that the resolution was not appropriately before the Board and went outside the scope of the Board's charter. He stated that the Board was unfamiliar with the resolution and did not have the time to become familiar. Tom Costikyan moved that it was inappropriate for the CAB to consider this resolution. Tom Greene seconded the motion. After discussion, this motion was restated as "The Board chooses not to further pursue this issue" by Tom Costikyan. Tom Greene seconded.

The motion passed with a vote of eight in favor, six opposed and three abstaining. (Note: Three additional members arrived between the two motions.)

Technical Briefings

Four technical presentations were sponsored by the Education Subcommittee. They included the regulatory framework of the Resource Conservation and Recovery Act and Federal Facility Compliance Act by Shelly Sherritt of SCDHEC; an overview of the National Environmental Policy Act and Atomic Energy Act by Brian Costner; an overview of the Solid Waste Program at SRS by Virgil Sauls of DOE-SR; and an overview of solid waste streams by Brent Daugherty of Westinghouse Savannah River Company. (For copies of visuals and a summary of presentations with questions and answers, see Appendix A.) One technical presentation on solid waste disposal was postponed until the next Board meeting.

P.K. Smith, chair of the Education Subcommittee, distributed a chart of Resource Conservation and Recovery Act/Comprehensive Environmental Response, Compensation and Liability Act waste units to show the Board ongoing environmental remediation activities they could become involved in. She stated that there were three issues common to all waste units: future land use, budget and risk assessment.

Ann Ragan expressed concern that the chart might not reflect the most current data. Leslie Huber of WSRC-ER stated that it reflected waste units where environmental remediation work was in progress at the time and that waste units in Appendix E of the Federal Facility Agreement were not yet in progress.

Tom Greene suggested all handouts to the Board be dated in a bottom corner.

P.K. Smith then explained a DOE complex-wide Environmental Management Risk Initiative to address the need for a consistent approach to risk assessment, risk management and risk communication. (see handout) She stated that a 15-member team lead by Tulane and Xavier Universities will be visiting the Savannah River Site in late July and asked the Board if they would like a briefing from the group at the next Board meeting.

Brian Costner moved the Board request the team to meet with them on July 25. Bill Lawless seconded the motion. **All members voted unanimously in favor of this motion.**

Brian Costner presented a motion to establish a Subcommittee on Risk Management and Future Use. (see attached handout) He stated that SRS is in the early stages of developing a Future Use report due by December 1995 and that this is a good time for the Board to get into this issue. He suggested that the subcommittee include non-Board members.

Bill Lawless seconded the motion.

Much discussion pursued on whether this subcommittee would act independently of the Education Subcommittee.

P.K. Smith suggested an amended motion which would make the Risk Management and Future Use Subcommittee a separate entity within the Education Subcommittee. Alice Hollingsworth seconded the motion.

Brian Costner suggested that the subcommittee be able to draft recommendations and get them on the agenda before the Board and then ask the Board to vote on them.

Tom Greene stated that he was against this new subcommittee going under the Education Subcommittee. He stated that more general public input and response should be allowed.

The vote on the amendment to the motion of the Risk Management and Future Use Subcommittee reporting through the Education Subcommittee passed with a vote of nine members in favor, seven members opposed and one member abstaining.

The original motion, as amended to create a Risk Management and Future Use Subcommittee, passed with a vote of 16 members in favor, one opposed and none abstaining.

Technical presentations were given at this time. (See Appendix A)

Subcommittee Reports

Education Subcommittee Path Forward

Brian Costner asked for the Board's input into how the Education Subcommittee should proceed. He stated that July was a unique opportunity for the Tulane and Xavier presentation and a presentation of the 1993 annual Environmental Report. He said these two presentations, coupled with more solid waste presentations, would fill the agenda in July and that from August to November the Board would return to its original educational schedule and explore issues as they emerge. He stated that the Education Subcommittee needed more feedback from Board members on whether the information was meeting their needs.

Budget Subcommittee

Tom Greene, chair of the Budget Subcommittee, said that due to time constraints he would like to walk out of the room with an approved budget. He began by explaining that no changes had been made to the overview, member travel to subcommittee meetings or miscellaneous travel sections of the original budget proposal. He stated that a CAB Retreat budget allowance had been added and that these costs assumed the retreat would be held outside of the SRS area for a three-day period.

He explained that no changes had been made to the Board meeting expenses section of the proposed budget and that the honorarium section had been deleted since these costs would not be incurred by the Board. Andrew Rea asked why these costs would not be part of the budget. Mark Musolf stated that anyone accepting the honorarium would be categorized as a special government employee and be paid directly by DOE. Andrew Rea then asked if there was any update on the Board's request to Tom Grumbly addressing this issue. Mark Musolf stated it was forthcoming. Bob Slay stated that he was not expecting a change to the present policy.

Lenola Cooks asked if the honorarium could be retroactive to the first meeting. Bill Lawless asked if this would be considered for special circumstances. Mark Musolf promised to get an answer.

Tom Greene continued presenting the revised budget stating that the hourly rate for a senior facilitator had been changed from \$100 per hour to \$85 per hour and that the junior facilitator and administrative role had been dropped. He stated that the annual report had been dropped from the advertising section of the proposed budget. Lane Parker asked if the Board was required to produce one. Mark Musolf stated that under the Federal Advisory Committee Act, the Board was required to annually submit a very simple report. Tom Greene also noted the addition of a community outreach and education section to the budget.

Tom Greene stated the administrative support section was discussed at length and that in trying to cut the budget, it was decided to have Westinghouse Savannah River Company handle the administrative support function. He stated he had been informed that morning that the Board will be able to operate independently using WSRC to provide administrative services. He stated that WSRC would be available to the Board to satisfy CAB administrative needs. He then asked if he had quoted that correctly. Mike Sellers, DOE-SR representative stated that Mr. Greene was exactly correct.

Andrew Rea asked when it became the goal of the Board to get the budget down between \$350,000 to \$400,000. Tom Greene stated that this was the guideline he had from DOE and that, according to his notes, that was the figure the Board was shooting for.

Beaurine Wilkins questioned if the Board voted on the budget today, could changes be made in the future. Thelonius Jones stated that he would like to see other people and companies get involved with administrative support.

Brian Costner moved that the \$65,000 stipulated in the budget for facilitation services be designated more generally to include any outside administrative services the Board may choose to contract for.

Andrew Rea stated concern that there was a strong presence by DOE and WSRC that is not necessarily conducive to the Board's independence from a public perspective. Harry Jue stated that he shared this concern of perception. However, he said he sees 25 people who can prevent any misconceptions.

Andrew Rea seconded Brian Costner's motion. **The motion passed with a vote of 14 members in favor, none opposed and three abstaining.**

Andrew Rea then presented a motion respecting the prioritization of any surplus funds toward use for administrative and or facilitating work. He suggested that it be specifically noted as part of the budget proposal that shifting of funds be allowed for flexibility. Harry Jue seconded the motion. **The motion passed with a vote of 13 members in favor, one opposed and none abstaining.**

Thelonius Jones asked for a show of hands of those Board members who felt comfortable with WSRC handling the administrative support for the Board. **The show of hands was 11 members in favor, four opposed and three abstaining.**

Lane Parker then made a motion to adopt the budget. Walter Jones seconded the motion. **The vote was 15 members in favor, none opposed and two abstaining.**

No other subcommittee reports were presented.

New Business

Thelonius Jones stated major concern over the lack of public participation at CAB meetings and suggested the Board reconsider meeting dates.

Bob Slay said issue of meeting days had been raised three times and that clear direction had been given by the CAB. He said there would always be conflicts.

Lenola Cooks asked how many absenteeisms would be allowed by Board members and when an official record would begin to be maintained. Bob Slay stated that had been turned over to the membership subcommittee.

Bill Lawless stated he would like a handout on the ER program that gave risk rankings of the ER sites and would like to see a comparable risk ranking for the solid waste program. He also asked for a response concerning independent peer review of the annual Environmental Report.

Andrew Rea moved that Brian Costner be appointed to chairmanship of the Risk Management and Future Use Subcommittee. Bill Lawless seconded the motion. Tom Greene stated that he thought the Board needed time to think about the new committee's function before actually forming it and appointing a chairperson. Beaurine Wilkins agreed with Tom Greene and suggested that with so many Board members absent, this motion should be put on the next Board meeting agenda.

Thelonius Jones stated that he was concerned about the number of subcommittees and Board members choosing to participate on several. He felt Board members were being spread too thin.

Andrew Rea moved to table the motion until after public comments and Walter Jones seconded the motion. **The Board voted in favor unanimously.**

Public Comment

Joe Roberts, New Ellenton, S.C.

Mr. Roberts stated that he has been vitally interested in the CAB since its inception. He stated the Board is doing an excellent job. He also stated that he knew a man in Augusta, Ga. who would be a good administrator and leader for the Board.

New Business continued

The Board voted unanimously to remove the motion that Brian Costner be appointed to chairmanship of the Risk Management and Future Use Subcommittee from the table for further discussion.

Bill Lawless stated that this is just a subcommittee and should not threaten anyone. He suggested that Brian Costner should always have meetings following other subcommittee meetings to avoid conflict and that any member who wanted to participate could.

Bob Slay said it would be more appropriate to put it on the next month's agenda. Andrew Rea said he took exception to the manner in which he was forced to bring a resolution and suggested that Board members simply be able to notify the co-chairs when they wanted to make a motion and have it put on the next meeting agenda.

Brian Costner stated the reason he offered the resolution today is that the team making a report to Congress would be at the site next month and he felt the Board should be ready to meet and be organized.

Andrew Rea reminded the Board that all committees and structures are of interim status until the Board's by-laws are approved.

The Board voted on the motion to appoint Brian Costner chair of the Risk Assessment and Future Use Subcommittee, with 11 members in favor, three opposed and two abstaining.

Old Business

Regarding the schedule of upcoming meetings, Brian Costner moved that those arranging the meeting be flexible and look at nearby towns. Andrew Rea seconded the motion. **The motion passed with a unanimous vote by Board members.**

Brian Costner presented a motion to change the SRS CAB letterhead to reflect the important role of EPA and SCDHEC. (See attached handout) Andrew Rea seconded the motion.

Bob Slay stated that it was discussed that the ex-officio members names be added to the letterhead and asked Mr. Costner for a clarification of how he wanted the letterhead changed.

Brian Costner stated that a phrase referencing all three agencies and the Board's role be added.

Bob Slay stated that according to the Thomas Grumbly appointment letter, the Board will make recommendations to Mr. Grumbly specifically. Brian Costner asked if Mr. Slay was taking the position that the Board was not making recommendations to EPA and SCDHEC. Bob Slay stated he was not, but he believed the Board should make independent recommendations and be autonomous in making those recommendations. He did not think the Board should continually try to distance itself from DOE since DOE had chartered the group and is funding it. Brian Costner responded by questioning how a motion which doubles the number of references to DOE can be interpreted as an effort to distance the CAB from DOE.

Andrew Rea stated that although DOE chartered and funded the Board, this Board was created through a public participation process that included other agencies. He stated that this Board was certainly making recommendations to SCDHEC and EPA as well, and if there was any inclination not to do so, he would resign.

Bob Slay stated that the entire Board should not be involved in designing stationery. Brian Costner asked if Dr. Fiori, the site manager had an opinion on the Board's stationery. Bob Slay said he believed he did and he objected to anything that does not specify very clearly that this Board is a DOE Site Specific Advisory Board.

Ann Ragan stated that SCDHEC has been working on this Board for over two years and that it believed recommendations would be made to three parties. She stated that the stationery may not be a big issue, but saying the Board should provide recommendations to only DOE was a big issue.

Thelonius Jones asked the Board to close discussion and vote on the motion.

Brian Costner stated that the Board's existence originates with the Federal Facility Agreement and not with FACA and he questioned if his motion was misinterpreted. He also stated that if the Board's message to the world, which right now is its letterhead, is being restricted to the Board being only a DOE advisory Board, then at the very least everyone in the room should be aware of that fact.

Bill Lawless stated that he sees no problem with the letterhead since DOE owns the problems they have created and must fix them. He stated that recommendations are made not only to DOE but also to the general public and other agencies as well. He stated that the focus should remain on DOE.

The Board voted against the motion to change the CAB letterhead as outlined with three members in favor, nine opposed and three abstaining.

Next Meeting

The next meeting will be held July 26 at the Aiken Conference Center in Aiken, S.C. A public comment session will be held July 25 from 6 - 7 p.m. at this same location. *(The July 25 public comment session was later changed to the evening of July 26)*

Handouts

- "Remediation Process," P.K. Smith.
- "Environmental Management Risk Initiative," P.K. Smith.
- "Regulatory Framework of Resource Conservation and Recovery Act and Federal Facility Compliance Act," visuals, SCDHEC, Shelly Sherritt. (Appendix A)
- "SRS Solid Waste Management: National Environmental Policy Act and Atomic Energy Act," visuals, Brian Costner. (Appendix A)
- "Solid Waste Program," visuals, DOE-SR, Virgil Sauls. (Appendix A)
- "Solid Waste Streams," visuals, WSRC, Brent Daugherty. (Appendix A)
- "Proposed SRS CAB Priorities," Brian Costner.
- "Savannah River Site Citizens Advisory Board Proposed Budget Fiscal Year 1995," CAB Budget Subcommittee.
- Motion to establish a Subcommittee on SRS Risk Management and Future Use, submitted by Brian Costner.
- Motion to change the SRS CAB letterhead, submitted by CAB member Brian Costner.
- Agreement on SRS Federal Facility Agreement ER Program.
- Schedule of future CAB Meetings.

Appendix A

Technical Briefings

Education Subcommittee chair P.K. Smith opened with discussion on the briefings to follow. She referred to the Solid Waste Briefing Book which was distributed and the fact that it included background information on waste streams and fact sheets. She stated its purpose was to help the Board gain an understanding of past and current waste practices and their impacts to the environment.

Regulatory Framework of the Resource Conservation and Recovery Act and the Federal Facility Compliance Act.

Shelly Sherritt of SCDHEC presented a Regulatory Framework of the Resource Conservation and Recovery Act (RCRA) and Federal Facility Compliance Act. She opened by establishing the regulatory framework for some basic waste streams. She then focused on the purpose of RCRA and two important outgrowths of its requirements, the Federal Facility Compliance Agreement and Act. (see attached handout) No questions were asked following this presentation.

SRS Solid Waste Management: National Environmental Policy Act (NEPA) Atomic Energy Act (AEA)

Brian Costner gave a presentation on the National Environmental Policy Act (NEPA) and the Atomic Energy Act. He gave an overview, history and purpose of the two federal laws. He described the levels of NEPA actions and various ongoing NEPA actions affecting SRS, specifically the SRS Waste Management Environmental Impact Statement (EIS) and the Environmental Management Programmatic EIS. In describing the Atomic Energy Act, he emphasized the authority it gives DOE and the fact that low-level wastes are self regulated at DOE facilities. (see attached handout)

No questions were asked following this presentation. However, Bill Lawless commented that the Board could have an extraordinary impact during the scoping period of the NEPA process. He also stated that no independent peer reviews are conducted on EISs and should be. Concerning the Atomic Energy Act, he commented that DOE should not be self regulated but regulated by the Nuclear Regulatory Commission or some other agency.

Solid Waste Program

Virgil Sauls of DOE-SR gave an overview of the Solid Waste Program. He began by identifying the factors that drive the program and the various documents involved in the strategic planning of the program. He also explained the solid waste management process from generation of solid wastes to treatment, storage and disposal. Also included in the overview was a discussion of current and planned solid waste facilities and activities at SRS, and current and planned inventories of solid waste, waste minimization practices, issues related to treatment, storage and disposal options, and descriptions of the different types of solid wastes.

Questions and Answers

Following a discussion of the Solid Waste Management Plan (provided to the Board in the briefing book), which is basically a 5-year plan that proposes how to manage solid waste, the following question was asked.

Q. Do you plan to have an outside review or public review of the plan?

A. We went with an outside review. We brought in an independent group of people including Ed Berkey of the University of Pittsburgh, Lamar Priester, former head of SCDHEC and Barry Coe of Coe Associates. It was also sent to EPA and SCDHEC. We want to go out for public review. You are the first public group that we are seeking input from and we would like your input.

The following questions are related to discussion of the Site Treatment Plan, a plan to resolve a long-standing issue - how to treat millions of gallons of mixed radioactive and hazardous waste now being stored at DOE sites. It may also deal with waste being transferred among DOE facilities complex-wide.

Q. When the Site Treatment Plan goes into effect in October 1995, will all forms of waste management be in full compliance with all forms of federal regulations?

A. No, that will provide us the framework to bring ourselves into full compliance with all regulations at that time. When that goes into effect, we will probably still have large amounts of mixed waste stored onsite, but that plan will define the schedule for bringing on line the facilities necessary to treat that waste and work off the backlog.

Q. How long will it be after October 1995 before all forms of waste come into compliance with federal regulations?

A. I anticipate that it will be at least 2010 before the mixed waste backlog is worked off. High level waste is also considered mixed waste and the work off of that waste will be the longest period. At least 25 years.

Following discussion of the types of waste generated and accepted at SRS from offsite, which are all low-level waste and some are from naval reactors, the following questions ensued.

Q. What aspects of the waste are classified?

A. The naval reactor program operates the nuclear submarine program and they have certain design features they consider classified from a national security perspective. Therefore, some of the larger components they considered classified, like reactor heads or main coolant pumps, come to our site.

Q. And this is only low-level waste?

A. Yes.

Q. Is this the only low-level coming from off-site?

A. No we get other low-level job controlled waste like protective clothing, plastic sheeting, gloves and miscellaneous tools from Naval Reactor Laboratories.

Q. But not from other plants or commercial reactors?

A. No.

Q. What about from Pinellas, Mound or Pantex?

A. No, not at the current time. Although once they can adequately characterize their waste, we could receive waste from them.

Q. Can you receive low-level waste without notification to the public?

A. Each year we send SCDHEC a list of generators that could be sending waste in the upcoming year. That is the notification.

Q. How much bigger is that list than the list of actual generators who send waste to SRS?

A. I can get you the letter.

Q. Does job-control waste go through a screening process so you know what is coming and does it go through a minimization program before shipped to you?

A. Yes it does go through a waste minimization program before being shipped to us. There is no screen, because there is no waste below regulatory concern. If it is considered radioactive waste, then it is handled as low-level waste.

Q. Is it quantified? Do you know what's coming?

A. Yes, it is quantified and we know it's coming. They manifest it and give us the volume, weight, curies and types.

Q. Why is the job-control waste from laboratories coming here rather than to a commercial facility?

A. I do not know, I'll try to get you an answer to that.

Q. Could you expand on the current status of the waste certification program.

A. DOE orders require that all generators have a program in place to meet the waste acceptance criteria of the receiving facility. SRS is currently undertaking a large program to come into compliance with that portion of the DOE order. We have developed the criteria for low-level waste and mixed radioactive waste and it is currently undergoing review in DOE. While it is under review, generators on site are developing programs to characterize waste to meet the criteria. It will be fully implemented in March 1995.

Q. Are you still sending waste to storage facilities in the interim?

A. Yes, into shallow land burial. The offsite generators have not been audited against the criteria, but we expect less problems than with onsite generators.

Q. Are you considering peer review of the waste certification program?

A. Yes we had a consultant used in the commercial industry- Syntex 21 and a knowledgeable person from Hanford and West Valley.

Following discussion of handling transuranic waste and its proposed shipment to the Waste Isolation Pilot Plant (WIPP), the following questions ensued.

Q. Are there no requirements in place now for accepting waste that fall in the interim?

A. Yes there are in the WIPP Waste Acceptance Criteria, but they are now on revision four of that criteria. The criteria is a moving target.

Solid Waste Streams

Brent Daugherty of WSRC gave a presentation of solid waste streams. He gave descriptions and examples of four different solid waste types including past practices, current inventories and expected amounts of future generation. Due to time limitations, Mr. Daugherty only thoroughly presented one of the four solid waste types - TRU waste.

Questions and Answers

Following discussion of transuranic waste (TRU waste), which is waste contaminated with alpha-emitting transuranic radionuclides and have half-lives greater than 20 years and concentrations greater than 100 nanocuries per gram, the following questions ensued. (TRU waste generated and stored at SRS is primarily composed of Pu-238 or Pu-239.

Q. Can you describe how these wastes occur?

A. Primarily it is job control waste left over from any job within a facility. Clothing, rags, wipes and small tools which are taken out in large plastic bags. All TRU waste is double bagged and placed in either steel drums, steel boxes or concrete culverts.

Q. What about sludges? Are they stabilized in any way?

A. Some resins go through hicks which are suggested by NRC.

Q. Do you have any problems with potential reactions with the waste and plastic in bags?

A. Yes, there is gas generation - hydrogen, oxygen and carbon dioxide which build up in drums and could potentially be released to the environment.

Q. Is a reaction confined to plastics?

A. No it could be with any organic.

Q. If radionuclides are combining with organics, what compounds are being formed?

A. I don't know, the reaction with the plastics is decomposition of the material.

Q. Is it not possible to have a valve in the container to release gas?

A. Yes, we put filters in to let the pressure neutralize, but we can't let the plutonium out. Filters allow the gas to move back and forth, but not the plutonium.

Q. What are the possible effects on workers handling drums?

A. These are very low concentrations. There are no problems with normal ventilation, it could be a problem in a tight, confined space.

Q. With so much of the volume of the drum being hydrocarbon, did you ever study incineration to dispose of it?

A. Yes, we looked at incineration to decompose the waste to ash, but the problem was permitting and public perception, so we are looking at new things that do the same thing in a different way.

Q. Isn't one of the problems with incineration releases of plutonium to the environment?

A. Yes, that's correct.

Q. What would happen to the TRU waste buried under dirt on the pads if an earthquake or natural disaster occurred?

A. The concrete culverts are sealed and have certain design functions that act as hardened containment for waste. This is not to say they would all survive an earthquake, but that is what they are designed for.

The following questions ensued after the Board saw photographs of TRU waste pads.

Q. Are any of the concrete culverts storing TRU waste leaking?

A. No, there are no liquids stored in the culverts, it's just rainwater.

Q. But could the material in the culverts disintegrate?

A. In drums, yes, but not the drums in culverts because they are primarily Pu238 and generate heat. Studies showed their surfaces to be 108 degrees Fahrenheit and therefore they stay dry and any water that would hit the drum would evaporate on contact.

Q. Can water build up at the bottom of culverts?

A. Not likely, the culverts are porous.

Q. Have you tested for that?

A. Yes, it is in a report.

Q. Are the drums standard steel with galvanized coating and a 20-year life span?

A. Yes, that's correct, they were originally designed for 20 years based on contact with soil.

Q. Are the culverts sealed?

A. Yes, but filters let water in the drums, so we have standing water in drums on uncovered TRU waste pads. We are retrofitting pads with spring covers to prevent rainwater.

Q. What are you doing with the dewatered drums?

A. The drums are placed back under covers and the water is processed in a holding tank, sampled for radioactive or hazardous constituents and, depending on the test results, treated as waste. No constituents have been found yet.

Q. How many TRU waste pads are there?

A. Nineteen.

Q. What is a TRU pack?

A. A special container designed for shipping waste. TRU waste will have to be transformed before it can be shipped. We are looking at molten glass.

Q. Can you put the TRU waste in high-level waste tanks?

A. Currently that is not in the program. The high-level waste tanks are wastewater treatment permitted and a significant portion of Pu-238 is mixed waste.