SRS Citizen's Advisory Board

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Old Radioactive Waste Burial Ground Focus Group

Meeting Summary

October 11, 2000
Aiken Federal Building
Aiken, SC

The Citizens Advisory Board (CAB) Old Radioactive Waste Burial Ground (ORWBG) Focus Group met on Wednesday, October 11, 2000, 5:00 p.m., at the Aiken Federal Building, Aiken, S.C. The purpose of the meeting was to discuss the long-term stewardship perspectives at other Department of Energy (DOE) sites, independent scientific peer review (ISPR) comment status, the draft Final Report, deep burrowing animals and roots completion of closure of ORWBG and the Focus Group comments/agreement on the letter on Recommendation #106. Those in attendance were:

CAB Members	Stakeholders	DOE/Contractors
William Willoughby	Lee Poe	Ed McNamee, BNFL
Karen Patterson	Jerry Devitt	Don Toddings, BNFL
	Todd Crawford	Sonny Goldston, WSRC
	Bill Lawless	Jim Moore, WSRC

Lee Poe, Technical Lead, expressed apologies from Jimmy Mackey, Team Lead, that he was unable to make the meeting. Rod Rimando, DOE, and Elmer Wilhite, WSRC, were also unable to attend due to personal reasons. Their respective presentations have been postponed until November 8.

Independent Scientific Peer Review (ISPR) Comment Status

As requested by the Focus Group, Bill Lawless and Jim Moore, WSRC, talked to Jimmy Mackey, Brendolyn Jenkins, and Perry Holcomb about the Focus Group responses to their comments given at the Environmental Remediation (ER) Committee meeting on August 22 concerning the ISPR Final Report. Mr. Moore reported that all the issues had been resolved with all three individuals by October 4. Mr. Poe wrote a letter to that effect to the ER Committee Chair, Jimmy Mackey, on October 4. Mr. Poe and Mr. Moore spoke to Dr. Karam, the ISPR team lead, concerning the suggested changes to the Final Report on October 10. Dr. Karam is reviewing the suggested changes and will incorporate them as appropriate. The suggested changes are as follows:

- **Change the first sentence in the Executive Summary to reflect the correct Scope of Work.**
- **Place the two definitions in the Executive Summary in layman's language: partition coefficient and committed effective dose equivalent.**
- **Correct reference to 10 mrem/year vs. 4 mrem/year drinking water standard.**
- **Use document references vs. individual names.**

Draft Final Report – Section Assignments

Mr. Poe reviewed the outline for the ORWBG Focus Group report. He stated that a suggested name was *Long Term Analysis of the Need for Cleanup and Closure of ORWBG.* He also suggested the addition of section H in the appendices that would be the comparative risk of DOE and DOE facilities. Mr. Crawford questioned some of the example assumptions in the Assumptions Section 4.0. It was suggested that this section be titled Basis for Analysis instead of Assumptions.

There was also much discussion on the length of time the active institutional control would keep the ORWBG and Fourmile Branch free from public intervention. The discussions ranged from 100 to 1,000 years. Several felt that 500 years should be the number. There was discussion that if a controversial number were used, then it could be a distraction from the real purpose of the document. Bill Willoughby suggested that the words "as long as a potential hazard to the public exists" be used instead of a specific number.

Ed McNamee, BNFL, suggested that a section be added to the Final Report that would give credit to the work already accomplished by the Focus Group and the public. He said at this time there is nothing in writing that states the impact that the Focus Group has had on the process. Originally the process that would have been used on the ORWBG would have been the pump and treat process that is very expensive. Due to public concern, other alternatives were considered and the Focus Group was formed. The process moved from pump and treat to phytoremediation which is considerably less expensive. It was decided that a section 10 would be added to include the impact of the citizen's work.

Mr. Poe stated that the appendices should be developed first in order to help develop the main sections of the report. Assignments for writing the appendices were as follows:

- **Appendices A and B - Jim Moore**
- **Appendix C - Dr. Karam – Insert of ISPR Final Report**
- **Appendix D - Either Gene Rollins, Todd Crawford or Bill Lawless**
- **Appendix E - Karen Patterson**
- **Appendix F - Bill McDonell**
- **Appendix G - Lee Poe**
- **Appendix H - Presentation by Rod Rimando**

Assignments for the body of the report at this time are:

- **Section 3.0 - Bill McDonell**
- **Section 9.0 - Bill Willoughby**
- **Section 10.0 - Bill Lawless**

Mr. Poe requested that the drafts of the appendices be completed by the end of November. It was also suggested that the distribution of the drafts be kept within the working group of those assigned sections/appendices with the addition of Jerry Devitt and Gene Rollins.

Bill Willoughby was requested to present his findings on the various organizations that look at the various standards to give an understanding of the complexity and confusion that exists related to standards.

Mr. Willoughby reviewed three different events: Bridging Radiation Policy and Science (BRPS) International Conference, United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and the Government Accounting Office (GAO) Report. Points of interest in the three are as follows:

BRPS International Conference

- **Did not attempt to resolve the linear no-threshold debate.**
- **Public believes that there are unknown effects and factors that are not understood by the experts.**
- **Debates over radiation protection are more intense in the United States than internationally. "The U.S. speaks with many voices and that is the strength of the U.S., but there are too many voices."**
- **The lowest dose at which a statistically significant radiation risk has been shown is ~ 10 rem.**
- **The effects of low level radiation below 100 mrem per year above background radiation cannot currently be distinguished from those of everyday natural health hazards.**
- **The concept of collective dose is often misapplied.**
- **No radiation dose is below regulatory concern but certain levels should be below regulatory action, and appropriate dose levels should be established.**
- **Pressing need for more effective communication by scientists with the public, politicians, policy makers, regulators, and other interested persons.**

UNSCEAR

- **United Nations bodies; notably the International Atomic Energy Agency, the International Labour Organization, and the World Health Organization rely on the UNSCEAR findings.**
- **The worldwide annual average dose due to natural radiation is maintained at 240 mrem.**
- **All "man-made" radiation sources add very little to the natural dose.**

    - **Diagnostic medical, 40 mrem**
    - **Atmospheric testing, 0/5 mrem**
    - **Chernobyl, 0.2 mrem (corrected)**
    - **Nuclear power production, 0.02 mrem (corrected)**

- **For exposures at or directly due to work that gives more attention to those from man-made rather than natural sources; the worldwide average annual effective dose has dropped since the early 1970s, from some 190 mrem to 60 mrem, in all the main work categories.**
- **It stands by its long held position on the linear no-threshold hypothesis.**
- **Say there is plausible argument for more study on the linear no-threshold hypothesis.**
- **Increase in harm is extremely small; given a dose increase of 100 mrem may be 0.0005 percent.**
- **Need to know whether at very low doses the repair processes are more efficient at preventing any damage to the cellular components.**

GAO Report

- **Can be found at http://www.gao.gov/ (GAO/RCED-00-152 issued 7/14/00).**
- **U.S. regulatory standards to protect the public from potential health risks of nuclear radiation lack a conclusively verified scientific basis.**
- **There is a lack of conclusive evidence of low-level radiation effects below total exposures of about 5,000 to 10,000 mrem.**
- **Lacking conclusive evidence of low-level radiation effects, U.S. regulators have in recent years set sometimes differing exposure limits. In particular, EPA and Nuclear Regulatory Commission (NRC) have disagreed on exposure limits.**
- **EPA standards for high level and transuranic wastes and clean-up and decommissioning of federal and commercial nuclear facilities and non-binding guidance for superfund sites**

are both a public protection limit of 15 mrem and a groundwater under the site limit of 4 mrem annually.

- **NRC standards for high level waste, low-level wastes and decommissioning are a single 25 mrem annual all-pathways public protection limit.**
- **General public exposure standard is 100 mrem annually.**
- **Worker exposure standard is 5000 mrem annually.**
- **Worker lifetime accumulated exposure guide is (Age – 18) 5 rem. (This item is not in the GAO report).**
- **Federal Emergency Management Agency has 25 rem as the accident evacuation criteria.**

Focus Group comments/agreement on the letter on Recommendation #106

Mr. Poe stated that he had developed the ORWBG Focus Group Documentation of the CAB's Disagreement with the SRS Planned Interim Action for Remediation of Releases from the ORWBG along with a cover letter to the Chairman of the ER Committee, Jimmy Mackey. Todd Crawford had a modification to the cover letter. Mr. Willoughby suggested a change to the Disagreement letter that he gave to Bill Lawless. Mr. Lawless will get the language to Mr. Poe to include in the letter. Mr. Poe would like to get the letter out as soon as possible to Mr. Mackey. Ed McNamee was to get a CAB Committee meeting notes reference to the comments made by the public that generated the change in process from pump and treat to phytoremediation.

Path Forward

The next ORWBG Focus Group meetings were scheduled for Wednesday, November 8 and Wednesday, December 6.

With no other comments, the meeting was adjourned.

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