SRS Citizen's Advisory Board

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# Facility Disposition & Site Remediation Committee

**Meeting Summary**

**Aiken Federal Building, Aiken, SC**
**September 9, 2003**

The Citizens Advisory Board (CAB) Facility Disposition & Site Remediation Committee held a meeting on September 9, at the Aiken Federal Building, Aiken, S.C. The purpose of the meeting was to discuss and receive updates on Monitored Natural Attenuation/Enhanced Passive Remediation Project for Chlorinated Solvents; Remediation to Stewardship a Strategic Plan for Accelerated Closure of SRS Inactive Waste Sites, and a Memorandum of Agreement for Achieving an Accelerated Cleanup Vision for SRS. Those in attendance were:

| **CAB Members** | **Stakeholders** | **DOE/Contractors** |
|---|---|---|
| Perry Holcomb* | Joe Santos, public | Alice Doswell, DOE |
| Leon Chavous* | Russ Messick, public | Bob Aylward, WSRC |
| Dorene Richardson* | Rick McLeod, CAB Tech | Karen Adams, DOE |
| Bill Willoughby | Chip Vangelas, public | Barry Shedrow, WSRC |
| Murray Riley* | Jim Sutherland, public | Brian Hennessey, DOE |
| Harold Rahn | | Paul Sauerborn, WSRC |
| Mary Drye* | | Brian Looney, WSRC |
| | | Karen Vangelas, WSRC |
| | | Dean Hoffman, WSRC |
| | | George Mishra, DOE |

*Members of the FD&SR Committee

Perry Holcomb, Chair, opened the meeting at 6:00 p.m. and welcomed those in attendance. Introductions followed.

**FD&SR Committee meeting schedule review:**
Paul Sauerborn explained the schedule that listed those items that the ER committee has seen to date and those items which it will be reviewing for the balance of 2003. Mr. Sauerborn stated that should anyone in the public have an item relevant to the ER committee scope to please notify him in order that he have those items reviewed and approved by the chairman of the FD&SR committee. Mr. Holcomb noted that at our last meeting, the presentation on

Carolina Bays was a request by public.

**Monitored Natural Attenuation/Enhanced Passive Remediation Project for Chlorinated Solvents:**
Brian Looney stated the overview of this presentation is to initiate dialogue on a newly funded science and technology project, elicit feedback from stakeholders that when combined with feedback from regulators and end users will provide guidance to the project's technical team to achieve overall development and acceptability. Mr. Looney presented the following background:

- Chlorinated solvents represent many of the largest and most challenging plumes at DOE sites across the country – including the Savannah River Site, Oak Ridge Site, and the Hanford Site.
- To facilitate implementation of MNA and EPR, the DOE Office of Environmental Management has sponsored an Alternative Project.
- The project, narrowly focused, provides the scientific and policy support to facilitate implementing appropriate passive cleanup and cost effective monitoring strategies leading to responsible completion of remediation activities at high risk DOE waste sites.
- A technical working group with broad national representation was formed to strategically guide the project.

Mr. Looney explained the key objectives to be:

- Develop the concept of enhanced passive remediation and all forms of sustainable passive natural remediation.
- Gain regulatory concurrence in the states and regions overseeing the Savannah River Site, Hanford, and Oak Ridge – work with interstate and national regulatory partners to contribute to national NMA efforts.
- Advance the science and broaden the understanding of natural attenuation and remediation systems.
- Establish and document new monitoring paradigms that provide high levels of performance for reduced costs.

Mr. Looney identified a technical organization, which includes participants across the DOE complex sites, that will critically examine opportunities for expanding MNA by following ground rules and directed lines of inquiry within the topics: Scientific Basis and Characterization/Monitoring.

The summary line of inquiry – scientific bases are:

- Natural Processes
- Natural Processes with Enhancements
- Interfaces

- Scenarios

The summary lines of inquiry – characterization and monitoring are:

- Strategy
- Multiple Lines of Evidence
- Non-standard Monitoring Concepts
- Modeling
- Sensors
- Configuration of Monitoring Systems
- Advanced Bioassessment Tools

In addition to the above summaries, the technical organization was to consider biodegradation by the following:

- Reductive dechlorination
- Anaerobic oxidation
- Fermentation
- Co-metabolism

The above processes are difficult to measure directly, so a series of indirect measurements are used to deduce their presence/absence/and rates.

Mr. Looney explained the value of characterization and monitoring objectives. The fact is that MNA is viable if the sum of the various mechanisms is sufficient to attenuate the contaminants and protect potential receptors. The characterization provides evidence that the attenuation capacity in the system is sufficient and sustainable. Monitoring verifies the attenuation capacity is maintained over time and as conditions vary, until remediation objectives are met.

Mr. Looney explained the role of biomonitoring tools and molecular tools. Biomonitoring tools:

- Support MNA decisions
  -verify key processes
  -the "third line" of evidence
- Assessment of Capacity
  -how fast, how much
- Replace other parameters?
  -i.e., becomes a direct measurement not a third-line of evidence

Mr. Looney stated that when MNA exceeds loading, then the contaminant plume is shrinking.

Molecular tools:

- DNA Microarrays

-thousands of "fuctional" genes from species or whole communities are placed on a chip
-samples extracted and chips exposed
-correlate which genes ‘light up" and their intensity to identify and quantify the metabolic processes that are occurring

a. How fast and where is TCE being dechlorinated?
b. How is an electron donor being metabolized?
c. Identify or assess new metabolic processes that are not as well characterized

Mr. Looney concluded by stating the path forward for a three month window of activity as follows:

- Peer review of science and technology targets document.
- Conduct competitive process for selecting studies to support high ranked science and technology targets.
- Conduct briefings for end users, regulators and stakeholders associated with Savannah River, Hanford and Oak Ridge Sites.
- Initiate newly approved project with the Inter-State Technology Regulatory Council.

**Remediation to Stewardship: A Strategic Plan for Accelerated Closure of SRS Inactive Waste Units:**
Dean Hoffman rolled out the Soil and Groundwater Closure Projects Strategic Plan. Mr. Hoffman stated that the reason he did not hand the booklet out before he addressed the group was so that he could walk everyone through the highlights of the plan and tips as to how to use it.

Mr. Hoffman stated that the Soil and Groundwater Closure Projects team has made significant progress historically and that FY03 saw no change in that ability to move forward. Mr. Hoffman simply said the completion strategy features effective project management, innovative technologies, strong working relationships with regulatory agencies, and continues to utilize cost-effective technologies and natural remedies.

The areas identified by Mr. Hoffman were as follows:

Part I: Current SRS soil and Groundwater Closure Program
Part II: Completion Strategy
Part III: Strategic Influences
Part IV: Completion Strategies by Project Areas
Part V: Completion Strategy Progress: Current Status

Mr. Hoffman stated that this Plan feeds the Comprehensive Cleanup Plan, which will be addressed in the next presentation to be given by Paul Huber.

**Achieving Accelerated Cleanup:**

Paul Huber explained the change in perspectives relative to the cleanup of the SRS. Mr. Huber stated that the first step was the Performance Management Plan (PMP), which reflects DOE's changed approach from "risk management" to "risk reduction" and emphasis on cleanup earlier. The next step was the DOE/WSRC contract modification, which resulted in the following:

- Further accelerated risk reduction and earlier cleanup objectives of the PMP
- Specifically identified end states to be achieved by the end of FY06
- Focused environmental restoration and decommissioning work on T,M,D, and F areas
- Incentivized performance for achieving desired end states during the contract period

Mr. Huber identified the path forward is to achieve accelerated cleanup, and on March 17th, 2003 DOE, EPA and SCDHEC established a management core team to design a faster and more effective SRS cleanup program to change from environmental management to environmental closure. To accomplish this end the management team began the process of designing a dynamic cleanup program that:

- has a bias for action
- integrates both the D&D and ER closure activities
- accelerates the footprint reduction

Mr. Huber stated that in order to understand more clearly accelerated cleanup, we must first break down the concept.

1. The SRS EM Program Management Plan: sets the vision and "begins the trip"
2. The Letter of Support for Accelerating Cleanup at SRS: States Acceleration is good, and the Parties will collaborate to take advantage of this opportunity to meet or exceed PMP objectives while maintaining compliance with laws and regulations
3. The Memorandum of Agreement for Achieving an Accelerated Cleanup Vision for SRS: sets principles to support accelerated cleanup, defines regulator involvement, supports whole area closures leading to NPL deletion, directs development of a Comprehensive Cleanup Plan and development of new progress metrics

The Core Team has established design teams to work on programmatic and implementing processes to effectively use the Area ROD concept in achieving the accelerated end-state objectives. The Programmatic Design Team will look at the following:

- Comprehensive Cleanup Plan (CCP)
- RI/FS Streamlining
- Decommissioning
- NFA/IC Plug-In ROD
- NPL Deletion/Area ROD Template
- Stakeholder Communication

The Implementing Design Team will look at:

- Contaminant Migration
- Risk Assessment
- FY2004 Appendix E of the FFA
- Metrics
- General Training

For purposes of current actions being pursued, the programmatic team is working on the CCP and the implementing team is developing and finalizing the FY2004 Appendix E and Metrics.

Mr. Huber identified the Comprehensive Closure Plan Design Team was to develop a Site-wide plan addressing the integration of decommissioning and environmental restoration work that supports an end state of 2025. Also the reshaping of Appendix E of the FFA, using area RODs and the Low Risk Plug In / Institutional Control ROD, the site will expect top realize approximately a 45% reduction in document production requirements.

In conclusion, Mr. Huber outlined the following as the next steps in the achievement of accelerated cleanup:

- Develop a mutually acceptable Appendix E by September 30, 2003 based on area closures
- Issue a first draft of the CCP by September 30, 2003
- Identify and charter topic-specific design teams to develop or modify implementing protocols
- Build new Life Cycle Cost Estimate on areas and incorporate into the baselines
- Adjust contract scope as necessary to align with the newly developed Appendix E

**Public Comments:**
There were no public comments.

Mr. Holcomb adjourned the meeting at 8:15 p.m.

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