

Summary Notes, April 16, 2007
SRS Citizens Advisory Board
Waste Management Committee Meeting

The Savannah River Site (SRS) Citizens Advisory Board (CAB) Waste Management Committee (WMC) met on Monday, April 16, 2007, 5:00 – 7:20 PM, at the Aiken Federal Building, Corporate Parkway, Aiken SC.

The purpose of this meeting was to discuss the following:

- 1) Status of the Salt Waste Processing Facility Project (*informal remarks*);
- 2) Status of the Integrated Salt Processing System Modification Project (*presentation*);
- 3) SRS Seismic Activity History (*presentation*);
- 4) Status of the Saltstone Modification Permit appeal (*informal remarks provided by email from Shelley Sherritt, SCDHEC*); and
- 5) Public comments.

Attendance was as follows:

CAB Members

- Joe Ortaldo
- Art Domby
- Bob Meisenheimer
- Franklin Boulineau
- Leon Chavous
- Stan Howard
- Manuel Bettencourt
- Karen Patterson
Judy Greene-McLeod
Mary Drye
Madeleine Marshall
K. Jayaraman

Stakeholders

Jack Roberts
Bill McDowell
Perry Holcomb
Bill Lawless

*Rick McLeod, V3

DOE/Contractors/Others

Terry Spears, DOE
Bill Spader, DOE
Sheron Smith, DOE
Soni Blanco, DOE
Mike Mikolanis, DOE
Guy Girard, DOE
Debbie Wisham, V3
John Contardi, DNFSB
Fred Beranck, WSRC
Jim Moore, WSRC
Ginger Dickert, WSRC
Steve Thomas, WSRC
Dave Olson, WSRC
Charles Hansen, Parsons
Dave Amerine, Parsons
Tom Burns, Parsons

- Waste Management * CAB technical advisor
Committee Members

Welcome and Introduction:

Joe Ortaldo, Chair, welcomed and thanked everyone for attending the meeting. Mr. Ortaldo referenced the meeting ground rules, reviewed the agenda, and asked for introductions of all attendees.

His opening remarks included a brief statement from Shelly Sherritt, SCDHEC that stated DHEC continues to monitor the status of the request for a Contested Case hearing on the Saltstone Disposal Facility permit modifications decision; however, DHEC is not, at this time, aware of any legal filings since the last Waste Management Committee meeting.

Mr. Ortaldo continued with reminders of the upcoming Defense Waste Processing Facility (DWPF) and Liquid Waste Planning Center tour scheduled on April 17th, and he encouraged attendance at the upcoming committee meetings.

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Salt Waste Processing Facility Schedule Update – Guy Girard, Federal Project Director

Mr. Girard provided informal remarks of the Salt Waste Processing Facility Project schedule and cost status and how the Defense Nuclear Facilities Safety Board (DNFSB) concerns are being addressed by the Department. He stated that discussions with the DNFSB are going well.

Mr. Girard continued by stating that the facility design sensitivity studies are expected to be issued on April 20th. These studies will indicate how robust the facility needs to be constructed to meet the seismic concerns. The Department will review the study which ensures stresses can withstand settlement and that the current design of the structure and footprint is the same, and with no dramatic changes. Mr. Girard stated there have been some design changes in the facility structure, such as a thickened base mat. In parallel, the January 2007 baseline is being evaluated to identify savings. Additionally, impacts associated with the redesign due to the seismic/geotechnical and other issues are being evaluated, but we will not know the impacts until mid May. The Department plans to meet with the DNFSB staff on April 30th and with the DNFSB on May 9th. The External Independent Review of the project proposed baseline is planned to occur in mid-June. Mr. Girard stated that an approved cost and schedule baseline and plan to start some limited construction is forecast for the end of September. Efforts to begin temporary services (telephone, install fences, etc.) at the facility location can occur prior to this timeframe.

In closing, Mr. Girard stated that the Department plans to know the answers and will close on issues by mid-May.

The CAB members had several questions. Mr. Ortaldo stated that it appears the issues with the DNFSB is being resolved or on a path forward for resolution. Mr. Miesenhiemer asked if the Department is expecting any surprises. Mr. Girard replied that we are working in real time on information exchange with the DNFSB with lots of synergy and that we do not expect any surprises. Mr. Bettencourt asked if there are any staffing issues with Parsons. Mr. Tom Burns, Parsons Representative, stated that sufficient staffing is no longer a high level risk. Mr. Domby asked if the base mat increase of sizing a relevant change or a fundamental change. Mr. Girard stated that a high potential for the base mat thickness to increase (upwards to 8 ft. vs. 5 ft.), doubling the rebar on the top and bottom of the foundation, with the addition of shear steel (vertically place rebar) which is quite an addition of steel and concrete. The assumptions made at the beginning of the design development have changed soft zones and differential settlement profiles. Ms. Patterson asked what is the purpose and outcome expected of the External Independent Review. Mr. Girard replied that the EIR is a required discipline invoked by DOE Project Management directive requirements and that the review will focus on technology, cost, schedule, and staffing. The EIR is independent of the DNFSB concerns. Mr. Ortaldo asked when the project would have a defined schedule. Mr. Girard stated that the schedule would be provided to DOE-HQ mid-May for review. Mr. Miesenhiemer asked if the schedule has slipped nine months since a year ago and what kind of dollar increase in the cost. Mr. Girard replied that the schedule has slipped several months and that design funding in fiscal year 2007 and 2008 is sufficient. Construction funding is still being defined. He continued a phased critical decision process will be implemented to minimize delays in construction. Mr. Rick McLeod asked what involvement with the South Carolina Department of Health and Environmental Control (SCDHEC) on permit resolution preliminary discussions. Mr. Girard stated that frequent discussions have occurred with SCDHEC and will continue as the project baseline is developed and approved.

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Mr. Jack Roberts stated that in previous meetings, the CAB members had concerns about risks of delaying vs. the design of the construction of SWPF. Compare risk improvement vs. high level waste. Mr. Girard stated that the facility must be designed and constructed in accordance with existing requirements. The present risk does not change, it exists everyday; we will reduce the risk once the facility is constructed and operating, and ensure safety.

Mr. Ortaldo thanked Mr. Girard for providing the information, and he requested the CAB be kept informed on resolution of the DNFSB concerns, as well as SWPF progress.

Status of the Integrated Salt Processing System Modification Project – Soni Blanco, General Engineer.

Ms. Blanco provided an update on the Integrated Salt Processing System Modification Project to include recent accomplishments and upcoming activities of the Modular Caustic Side Solvent Extraction Unit (MCU) and the Actinide Removal Process (ARP).

Recent Accomplishments:

- Modular Caustic Side Solvent Extraction Unit (MCU)
 - Completed component and systems testing is been finalized
 - Completed cold chemical unloading
 - Started simulant testing
 - South Carolina Dept of Health & Environmental Control issued MCU Phase II Partial Permit to operate
- Actinide Removal Process (ARP)
 - Completed ARP Process Vessel Ventilation System fan testing and on-line Distributed Control System testing
 - Completed ARP Start-up testing
- Integrated Activities
 - WSRC continues working Facility Self Assessment
 - Completed Integrated Runs Operations Plan

Upcoming Activities:

- Complete cold runs for Waste Transfer Lines, ARP (96-H and 512-S) and MCU (5-29-07)
- Start ARP/MCU Proficiency runs (5-30-07)
 - Facilities' interfaces will be simulated
- Conduct DOE validation of WSRC readiness for Integrated Runs (Radiological Operations) during ARP/MCU Proficiency Runs

Open discussions and questions of how the process and permitting to begin hot operations of the MCU and ARP is affected based on the delays of the Saltstone Permit Mod appeal and the need for tank space.

Ms. Blanco provided the background, process, and stated the permits attained and needed for processing.

She continued by stating that during normal operations the system does filter and we were able to meet the expectations for removal of cesium and carryover for solvent at a minimum. Expectations are high for processing. The permit stipulates a certain amount of waste that we can

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process and by the dates. We plan to keep the evaporators running through 2010 which allows DWPF to keep running, but all three evaporators are affected until we get SWPF operating.

SRS Seismic Activity History – Mike Mikolanis, General Engineer

Mike Mikolanis provided a very informative presentation on the SRS Seismic Activity History.

Southeastern (SE) Seismic Sources

- SE is a very low level seismicity region
- Relationship between observed tectonic structures and seismic activity remains unknown
 - Therefore, in most instances seismic sources are inferred
- Diffuseness of events suggests multiple rather than specific seismogenic structural elements
- Only about 65% of instrumentally recorded events have a determined focal depth \pm 3 miles
- In the SRS region foci peak at a depth of about 3 miles
- Earthquake history of the SE spans nearly three centuries (1698-Present) and is dominated by the Charleston earthquake of August 31, 1886.
- The historical database for the region is essentially composed of two data sets:
 - The first set is comprised of pre-network, mostly qualitative data (1698-1974), and
 - the second set covers the relatively recent period of instrumentally recorded or post-network seismicity (1974-present).

Pre-Network Seismic Data

- The pre-network period consists of intensity data.
 - Intensity refers to the measure of an earthquake's strength by reference to "intensity scales" that describe, in a qualitative sense, the effects of earthquakes on people, structures, and land forms.
 - Modified Mercalli (MMI) Scale of 1931

Post-Network Seismic Data

- The first seismic network in the region was deployed by the USGS and the University of South Carolina in 1974.
- Operation continues today under the management of the University of South Carolina and is known as the South Carolina Seismic Network (SCSN).
- It currently consists of 28 stations strategically located throughout the state.
- By 1976, a three-station short-period vertical component network was also established at SRS to monitor potential earthquake activity near the SRS.
- Since 1986 the SRS network has been augmented with additional stations as shown.
- Seismic energy expressed in ***Richter Magnitude***

Earthquakes detected by the SRS Seismic Network

- Provided a map of the southeast region that showed seismic activity locations.

SRS Earthquakes

- 09 Jun 1985 M 2.6
- 05 Aug 1988 M 2.0
- 17 May 1997 M 2.5
- 08 Oct 2001 M 2.6
- 08 Oct 2001 M 1.0
- 08 Oct 2001 M 1.4
- 14 Oct 2001 M 0.7

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- 15 Oct 2001 M 0.8
- 12 Dec 2001 M 0.1
- 17 Dec 2001 M 1.1
- 06 Mar 2002 M 1.4
- 24 Sep 2006 M 0.6

Near SRS

- 15 Sep 1976 M 2.4
- 12 Dec 1992 M 1.2

Example Seismogram from SRS Station

- 08 Oct 2001 M 2.6 Event
- Hawthorne fire tower station located about 6 km north of epicenter.
- Top trace is east-west, middle is north-south, and bottom is vertical.
- Time runs along the x-axis, and digital counts run along y-axis.
- With a conversion factor the counts can be converted to velocity for a particular amplitude.

The presentation closed with open discussions and questions on the history of seismic activity in the southeastern region with explanations on why the PC-2 vs. PC-3 type structural facilities are necessary on the Savannah River Site.

Public Comment:

None.

Adjourn:

Mr. Ortaldo adjourned the meeting

Follow-Up Actions:

- Bill Lawless requested a copy of the MCU permit.
- Additional topic discussion included the potential of issuing a CAB position paper on the Request for Contested Case Hearing before the South Carolina Administrative Law Judge, NRDC vs. SCDHEC, and challenge to the Modified Permit for the Saltstone Disposal Facility. Art Domby and Joe Ortaldo plan to discuss further and receive CAB member's comments on path forward.