

## WM Symposia WM2010 Conference Panel Report

### **PANEL SESSION 12 Hot Topics and Emerging Issues in US Commercial Low Level Radioactive Waste Management**

**Co-Chairs:** Marcia Marr, *Central Midwest Compact Commission (USA)*

Kathryn Haynes, *Southeast Compact Commission. (USA)*

**Panel Reporter:** Linda Beach, *Waste Control Specialists, LLC.*

The Panelists were:

1. Michael S. Ford, Chair, *Texas Low Level Radioactive Waste Disposal Compact Commission;*
2. Rodney Baltzer, *President of Waste Control Specialists LLC;*
3. Ward Brunkow, *Supervisor of Waste Management/Decontamination Operations, Urenco USA;*
4. Kelly Crooks, *Chief of the Rad Waste Operations Division of the US Department of the Army's Joint Munitions Command;*
5. Thomas Magette, *Senior Vice President of Nuclear Regulatory Strategy at EnergySolutions, Inc.*

**Todd Lovinger**, Executive Director of the LLW Forum served as panel moderator. Kathryn Haynes of the Southeast Compact Commission and Colleen Owens of DeNuke served as panel Co-chairs. Marcia Marr of the Central Midwest Compact Commission organized the session but could not get funding to attend.

Todd Lovinger kicked off the panel session, briefly covering background information regarding the LLW Forum, stating that its mission is to assist states and compacts in executing their responsibilities. All ten compacts, five federal agencies, all low level radioactive waste (LLRW) disposal facilities and various nuclear utilities belong to the LLW forum. He then turned the session over to the panelists, and requested that questions be held until all panelists had spoken.

**Mike Ford** led off the presentations and provided background information on the Texas Compact Commission. The Commission is made up of six Texas commissioners and two Vermont commissioners. The Texas Compact Commission is a separate and distinct legal entity from the party states, and thus has had difficulty establishing a source of funding. It is estimated that Texas will dispose of 5 million cubic feet of waste, of which 1 million cubic feet will come from Vermont. This volume contemplates disposal of decommissioning wastes from all existing compact nuclear power plants as well as the contemplated eight additional power plants. This volume is greater than the current licensed volume of the Compact Waste Facility (CWF) at Waste Control Specialists. Draft rules for Export and Import of waste from outside the Texas compact have been published, and these rules are currently in the 60-day comment and review period. Mr. Ford explained that import/export would be a mass balance process; the volume of waste exported should equal the volume imported. As of this presentation, no formal comments have been received. Compact actions not occurring or at risk due to lack of funding include establishing a long term Executive Director, legal counsel, and technical staff for evaluation of requests before the Commission. Other issues of concern for the Commission include allowing waste from within the Compact to go outside the Compact for processing even if the waste is returned for in-compact disposal, as the waste could return with different radionuclides due to

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cross contamination at the processor. The Compact is also concerned about the issue of downblending, as the industry has spent considerable effort to reduce radioactive waste volumes, and this would increase LLRW volumes.

**Rodney Baltzer** provided an overview of Waste Control Specialists LLC (WCS) radioactive waste disposal cells. WCS has received its final license for the CWF and the Federal Waste Facility (FWF), which is historic. WCS is concerned about downblending, and has participated in the NRC public hearings on the topic. WCS believes that downblending is not safe, is not sound public policy, and is not needed. We have performed an analysis of a resident intruder into waste at the upper boundary for Class A LLRW, and have determined that the resident intruder could be exposed to 500 mrem/yr for up to 300 years into the future, which is well above the current regulatory limit. WCS believes that disposal in a proper facility designed for the hazards associated with Class B/C LLRW is the best solution.

Mr. Baltzer then discussed current initiatives at WCS. WCS has been very proactive to ensure that the local communities are involved and understand the activities at WCS, because the more the communities understand the issues, the more supportive they are. Currently WCS is storing five Class B/C liners from Studsvik. These liners may require an import agreement from the Texas Compact Commission for storage in the future, and they most certainly would require an import agreement for future disposal in the CWF.

Mr. Baltzer went on to state that importation would reduce the cost of disposal for Texas and Vermont generators, as our site is unequaled and expensive due to the requirement for disposal in concrete canisters. With importation, WCS will provide a solution for B/C waste, negating the need for downblending. WCS does not believe that importation will adversely impact disposal volumes required by the compact states. Financing for the WCS LLW disposal facility is expected to be through a general obligation bond issued by Andrews. The bond election passed 642 to 639, and is the first general obligation bond ever authorized by the county. The election results have been the source of litigation. Andrews is evaluating issuing a bond validation lawsuit. Construction of the LLRW disposal facility is projected to start in May, 2010.

Finally, Mr. Baltzer touched on the fact that WCS is DOE's preferred choice for mercury storage in the DOE Draft Environmental Impact Statement, with public meetings to be held in Eunice NM and Andrews TX this week. WCS is in discussions with DOE regarding the storage of depleted uranium, which we are fully licensed to store.

**Ward Brunkow** provided an update as to the status of centrifuge startup at the URENCO USA facility in Eunice NM, previously known as the Louisiana Energy Services National Enrichment Facility. URENCO USA is designed to enrich uranium to 5% U-235, and consequently has a large security force due to handling classified as well as business confidential material. URENCO USA has approximately 300 full time employees drawn locally as well as from all over the world. Currently they are proud of having worked over 7 million construction hours without a lost time injury. Mr. Brunkow stated that construction would continue for another 5-7 years as they increase from the original design capacity of 3 million separative work units (SWU) to 5.9 million SWU. The first cascade is scheduled to be operational in the next few months. The Nuclear Regulatory Commission continues to inspect and verify readiness, with the

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current emphasis being fire protection. URENCO USA will generate liquid and solid wastes, with air filters being perhaps the single largest radioactive waste stream. The site maximizes recycling to reduce waste, with future stripping of DUF6 tails as the most significant recycling effort if warranted by uranium prices. Understandably, URENCO USA is closely following the NRC rulemaking regarding depleted uranium (DU) classification and disposal criteria. Currently they have four options for DU disposal: deconversion at a private facility in the United States, ship to Europe for deconversion, use DOE deconversion facilities, or store on site the DUF6. Presently waste is disposed at EnergySolutions.

**Kelly Crooks** provided an update on the status of US Army LLRW. DU disposal is important to the Army as DU waste results from munitions manufacture as well as munitions use. Other significant waste streams include tritium used in illumination devices, legacy radium devices, sources associated with chemical detection instrumentation, and magnesium-thorium combustion liners in engines. LLRW management of Army waste is complicated as it involves thousands of items that are a mixture of specifically licensed waste, general licensed waste, and exempt waste. The Army is interested in being able to import waste to the WCS CWF for source disposal as well as for disposal of other waste streams. Issues facing the Army include funding decreases as base closure cleanups wind down, which were a source of a large percentage of the waste volumes. Waste minimization initiatives include a policy of disallowing the use of options using radioactive material if a non-radioactive option is available, for example prohibiting the procurement of tritium illuminated exit signs.

**Thomas Magette** provided an EnergySolutions update. EnergySolutions believes that LLRW does not need to be classified as A/B/C when it goes to a processor, and that the regulations only require classification for disposal. He stated that 10 CFR 20 Appendix G explicitly exempts classification of waste sent to a processor. Mr. Magette stated that resin can be safely down blended since clean, non-contaminated LLRW waste is **not** being introduced. Mr. Magette specifically disputed the WCS intruder scenario exposure model. At EnergySolutions Class A resins, which are in a non-dispersible waste form, are disposed in a liner and High Integrity Container within an engineered structure at a depth at least 5 meters below the cover. This configuration is protective of the public. Mr. Magette went on to discuss importation and exportation of radioactive materials and waste from outside the United States. This form of import/export has occurred for 10 years, and that EnergySolutions is a net exporter of radioactive materials due to export of shield blocks, which have volumetric radioactive material contamination. He discussed the import of a small quantity of radioactive waste from Italy. The District Court agreed that the Clive facility was not a Compact Facility, but this decision has been appealed with a decision expected in 3-5 months. NRC has elected to not act on the import petition pending outcome of the appeal.

Questions for Mr. Ward Brunkow, *URENCO USA*

Q1. Will the waste produced by URENCO USA contain uranium hexafluoride?

A1. Uranium oxides as well as uranium hexafluorides are possible waste contaminants.

Q2. Will URENCO USA build a deconversion facility?

Q2. It is more likely that URENCO USA would ship uranium hexafluoride to Europe for

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deconversion at existing facilities or work with International Isotopes.

Question for Mr. Rodney Baltzer, *Waste Control Specialists LLC*.

Q3. How long can WCS store the Studsvik resins, depleted uranium or the potential mercury?

A3. The time limits vary depending upon the specifics of the material, how it is received and various license conditions.

A4. It appears that your storage and processing license limits you to 356 days of storage.

A5. If the waste meets the requirements of interim storage, there is no time limit.