

WM2016 Conference Panel Report

PANEL SESSION 62: **US Nuclear Power Plant Waste Management – LLW Disposal Issues**

Co-Chairs: **Mark Lewis**, *EnergySolutions*
 Clint Miller, *Pacific Gas & Electric (PG&E)*

Panel Reporter: **Clint Miller**, *PG&E*

Panelists:

1. **Dan Burns**, *VP Business Development, Waste Control Specialists LLC*
2. **Joe Weisman**, *VP Radiological Programs, US Ecology*
3. **Michael Benjamin**, *Director Barnwell Operations, Energy Solutions*
4. **Dan Shrum**, *Energy Solutions*

About 35 people were present to hear this session about Commercial low-level waste disposal sites in the USA. The session opened with four panelists providing an update on their disposal sites. This was followed by a question and answer period.

Summary of Presentations

Dan Burns opened the proceedings providing an update on the Waste Control Specialists (WCS) Andrews, TX disposal site. This site hosts a Commercial cell, a Federal cell and a low activity RCRA cell. Sealed sources, TRU and GTCC waste is also stored at this site. The Commercial "Compact" cell is located between 30 and 100 ft below grade. Waste containers are placed and grouted into modular concrete canisters. The cell has disposed of primarily Class B/C waste from Nuclear power plants. One set of steam Generators have been placed into the cell. WCS has opened an exempt cell for low activity bulk waste. Several commercial generators have shipped waste to this cell. WCS has submitted a proposal to the Texas State regulator for GTCC disposal since the depth of their cell is deeper than a shallow land fill. The State of Texas has asked NRC if the State can regulate the disposal of GTCC waste. The State of Texas is awaiting a reply from NRC. [Just after the session ended, NRC informed the state that the current path for a State to regulate some GTCC disposal is available.] WCS has also proposed to store spent fuel at the site for 40 years. The proposal would address 80% of the used fuel currently at stranded at defunct reactor sites in the USA.

Joe Weisman described two US Ecology sites. The Richland, WA site is open for Class A and Class B/C waste but only for the Northwest and Rocky Mountain Compacts (1 NPP- Columbia Generating Station). The US Ecology Idaho RCRA site has disposed of a large quantity of low activity waste (45%) versus chemical hazardous waste. The RCRA permit includes radionuclides. US Ecology believes the use of RCRA sites for low activity disposal is an asset that can serve the USA and lower NPP decommissioning costs. Large debris is acceptable at the Idaho site greatly reducing the need to size reduce construction rubble. About 90% of the waste volume from Humbolt Bay power plant

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decommissioning has gone to US Ecology Idaho. In six years over 2,000 truck shipments from Humbolt Bay have gone to the Idaho site.

Michael Benjamin gave an over view of the *EnergySolutions* Barnwell, SC site. Barnwell is accepting Class A, B and C waste from the Atlantic Compact. The site has been open for 44 years and disposed of about 28 million ft³ and 14 million Ci. Currently the site is getting about 8,400 ft³/yr. The new reactors under construction in South Carolina were not envisioned when the Atlantic Compact was formed.

Dan Shrum gave a status report on the *EnergySolutions* disposal sites at Clive, UT. The Clive site has a bulk waste facility (BWF) and a containerized waste facility (CWF). The site accepted 41,000 sealed sources under a 1-year program. A license Amendment is being pursued to take sealed sources in the future. In June of 2011 *EnergySolutions* made a submittal for disposal of depleted Uranium. It is expected that the State of Utah will issue their decision in 2017.

Question and Answer

Question 1- When thermally treated waste is manifest as a waste processors waste but, a listing of the original waste generators is provided to ensure no foreign or out of compact waste is disposed of, what attribution is sent to the National DOE disposal database?

Answer 1 - At Andrews, TX; Barnwell and Clive, thermally treated residue are reported to DOE as the waste processor's waste (as manifested on the 542 Form). Richland and Idaho are not typically receiving thermal residue.

Question 2- How does the NRC 2015 BTP on Concentration Averaging and Encapsulation affect your site?

Answer 2 – Both Andrews and Clive have adopted the new BTP on Concentration Averaging & Encapsulation. Barnwell has not and may not.

Question 3 – How will the proposed changes to 10 CFR 61 affect your site?

Answer 3 – Neither Barnwell nor Richland are seeking to dispose of depleted uranium (DU) and are not interested in developing new PA models and the associated cost and unintended consequences. Clive already has developed a PA for their proposal to dispose of DU.