Features

Cover Stories—High-Level Waste/Spent Fuel

What Now for Permanent Disposal of Used Nuclear Fuel and HLW in the United States? 26
Implementation of a permanent disposal solution for used fuel and HLW is no easy task, especially in light of competing stakeholder interests, unprecedented compliance periods, and general reluctance among the public to accept any radiological risks from disposal regardless of magnitude.

First Double-Shell Tank Leak Discovered at Hanford 40
Waste has been found in the gap between the inner and outer shells of Hanford Tank AY-102.

Sludge Retrieval Receives a Lift at Sellafield 44
A look at one of the most technically challenging crane lifts ever performed on the Sellafield site.

Other Features

NNSS Waste Disposal Proves Vital Resource for DOE Complex 50
The NNSS is home to a state-of-the-art waste management facility, providing a permanent disposal option for a select group of LLW/MLLLW generators whose programs have passed a rigorous approval process.

Innovative Mercury Treatment Benefits Stream, Fish 58
Mercury in the treated water in Tims Branch at the Savannah River Site has been reduced more than 95 percent, achieving water quality limits that focus on lowering mercury levels in fish to protect people and fisheries.

Meeting Reports

Y-12’s Mercury Problem 62

Managing Radwaste around the World 64

A New Entity to Manage Nuclear Fuel 70

Waste Management 2012 Best Papers

Technical and Policy Challenges in Deep Vadose Zone Remediation of Metals and Radionuclides 76
On how hydrogeologic and biogeochemical processes may operate in the deep vadose zone and be used to meet remediation objectives.

Impact Analyses and Tests of a Metal Cask in the Event of an Aircraft Engine Crash 86
The safety assessment of an aircraft crash into a dual-purpose metal cask under development in Korea is performed using numerical simulations and tests.

On the Cover:
A map of the United States, showing areas considered as potential hosts for a geologic repository under the NWPA or otherwise deemed as potentially suitable (granites and shales). As discussed in the article beginning on page 26, the U.S. does not face a shortage of geographically distributed, technically suitable candidate locations if a new site-selection campaign is instituted.

Next Issue:
Low-Level Waste