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# waste Solutio

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## Features

## Cover Stories—Spent Fuel

#### Yucca Mountain Repository Standards: What Does the EPA Not Understand?

Ignoring the advice of the National Academy of Sciences/National Research Council, the EPA issued a dose-based radiation protection standard for the Yucca Mountain repository, rather than a risk-based standard. A risk-based standard is essential for a facility operating thousands of years into the future.

#### Some Views on Closing the Fuel Cycle

Comments by U.S. Nuclear Regulatory Commission Chairman Dale E. Klein.

### Other Features

#### EPRI's Groundwater Protection Program

Although monitoring the environment outside the nuclear power plant is a required and regulated operation, groundwater monitoring within the boundaries of the nuclear power plant is a new, self-imposed task for the industry.

#### Segmenting and Removing the CVTR Moderator Tank

Special tooling was deployed to segment the moderator tank of the Carolinas-Virginia Tube Reactor.

#### Improving Efficiency with 3-D Imaging: Technology Essential in Removing Plutonium Processing Equipment from Plutonium Finishing Plant Gloveboxes

Three-dimensional models have significantly improved the work-planning process by giving Hanford workers a clear image of glovebox construction and composition, which is used to determine cleanout methods and work sequences.

Radioactive Waste Not Wasted with New Green Chemistry Technology 32 Green chemistry will help Areva extract enriched uranium from tons of incinerator ash.

#### Preventing Groundwater Contamination from Early Operations at Hanford's Waste Treatment Plant 36

Treating Hanford LAW five years before the conclusion of WTP's construction could result in an increase in groundwater contamination.

#### Controlled Recycle: An Alternative to the Burial of Low-Level Radioactive Waste

An examination of the options of controlled recycle within the nuclear industry, citing several successful examples.

#### SRS/Clemson University Partnership Overcomes Challenge to Future Tank Closures

Waste storage Tanks 5 and 6 at SRS are on schedule to be permanently closed in 2010. These tanks will be the first closed at SRS that have cooling coils inside them, which presents a new challenge in the tank closure work.

D&D, Spent Fuel Transport Discussed at ANS Sessions A report from the 2008 American Nuclear Society Annual Meeting in Anaheim, Calif.



Green chemistry will be used to extract enriched uranium from incinerator ash, as the article beginning on page 32 describes.

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## On the Cover:

Map of the Yucca Mountain area, showing the locations of the repository site, the hypothetical community in which the reasonably maximally exposed individual, or RMEI, will be assumed to reside, the town of Lathrop Wells, the Amargosa Valley farming region, the Nevada Test Site, and neighboring areas. Articles beginning on page 10 and 13 discuss different aspects of spent fuel disposition.

## Next Issue:

2009 Buyers Guide

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