

## Alternative Landfill Cover (TechID 10)

The alternative landfill cover demonstration is a large-scale field test at Sandia National Laboratories in Albuquerque, New Mexico. Two baseline covers were constructed side-by-side with four alternative cover designs for comparison based on performance, cost, and ease of construction. The covers are being monitored for all water balance variables and supporting data. This field data will be compared with results from predictive computer models for validation of the models and for projection of the long-term performance of alternative covers. Alternative cover designs resist drying and cracking that impairs cover performance.



### Developers:

- US DOE, Sandia National Laboratories, Albuquerque, NM

### Applications:

- Waste disposal areas and landfills, especially in arid climates (e.g. Albuquerque and Nevada)
- The Accelerated Cleanup Paths to Closure estimates closure of over 3,000 landfills covering thousands of acres will occur between 1997 and 2002; ALCD could improve performance and reduce costs of these closures

### Benefits:

- In general, the four alternative barriers outperform the two baseline designs
- POTENTIAL STEP CHANGE. Costs 50% less than conventional landfill covers and requires less construction time to build (SNL MWL deployment cost savings of \$27M over an original baseline of \$39.1M)

### Status:

- FY97 deployment of an anisotropic (capillary) barrier at the Lee Acres Superfund site, NM (funded by DOI)
- FY98 demonstration of an evapotranspiration cover at Warren AFB, WY (not DOE funds)
- Four FY99 demonstrations at Sandia National Laboratories (Covers 1-4), NM
- FY99 deployment at Sandia National Laboratories, NM
- Planned demonstration and deployment of an evapotranspiration and a capillary cover at Sandia National Laboratory (funded by TDI at Mixed Waste Landfill; construction is to begin in FY00)
- Innovative Technology Summary Report Available ([www.cmst.org](http://www.cmst.org))