



# Waste Management Services

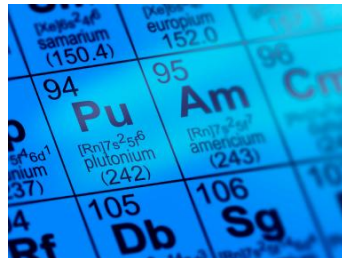
E2 Consulting Engineers, Inc. (E2) provides professional, cost-effective and compliant waste management services for sanitary, hazardous, radioactive and mixed waste streams. Our staff is experienced in:

- Sampling
- Characterization
- Waste Packaging
- Waste Profiling
- Process Optimization
- Transportation Logistics

## Recent Projects

### WIPP Central Characterization Project

In 2010, E2 was awarded a prime contract to support the Waste Isolation Pilot Project (WIPP) prime contractor on a portfolio of



TRU waste retrieval, repackaging, and characterization projects at various DOE locations. E2 personnel ensure adherence to Earned Value Management System (EVMS) cost and schedule baselines and compliance with applicable DOE Orders, including DOE Order 413.3A. E2 personnel are primarily responsible for assembling and leading multi-site integrated project teams and communicating routinely with the client.

Under the contract, E2 provides technical support in the performance of waste retrieval, repackaging, and characterization operations at various DOE locations. E2 provides nuclear facility safety basis support for Central Characterization Project (CCP) equipment and operations which includes:

- Preparation of safety basis documents in accordance with DOE Standards 3009, 5506-2007, 1027-92 and related guides
- Oversight and administration subcontracts for safety document support
- Liaison with host site safety staff
- Provides general project engineering/management support for new TRU waste retrieval and repackaging operations at DOE sites
- Supports start-up assessments (line management, formal readiness and operational readiness review) for new and modified waste management processes

The contract work scope also includes radiological engineering, health physics, and radiological control oversight for CCP operations such as:

- Assuring 10 CFR 835 compliances as it relates to new waste retrieval, repackaging, and characterization equipment deployments as well as ongoing radiological work by CCP operations staff
- Preparation of radiological design evaluations of new deployments and serve as the primary interface with host site radiological control staffs



## Hurricane Katrina Recovery Mission

When the levees broke and flooded the Lower Ninth Ward in New Orleans, LA, thousands of cubic yards of sediment remained when the waters receded. Initially, there was a health concern associated with the sediment, but as the sun dried out the sediment, test results showed no residual health hazard from biological constituents. However, there was still a concern about contamination from fuel (BTEX) and other household hazardous waste. The initial characterization approach was to excavate all the

sediment, stockpile it in a new location, and sample each 100 cubic yards prior to disposal. E2 worked with the U.S. Army Corps of Engineers (USACE) and Louisiana Department of Environmental Quality (LDEQ) to redefine the characterization process



for sediments washed into neighborhoods as the result of levee breaks. E2 evaluated the initial field sampling data to validate the homogeneity of the material. After sharing this data with the LDEQ and USACE, the final approach for sampling and removal of the sediment was to perform *insitu* sampling at a rate of one sample per 1000 cubic yards to confirm homogeneity of sediment. This improved productivity, reduced the safety risks associated with double handling, and saved over \$1.3 million.

## Los Alamos D&D Waste Management

E2 personnel plan and direct work activities and field personnel to execute environmental protection, compliance, pollution prevention, and surveillance, remediation activities in support of decontamination and demolition

(D&D) projects. This includes the development and implementation of policies, procedure, and systems related to D&D functions. E2 personnel operate within defined LANL procedures and policies to determine appropriate action, and are actively involved in daily operations to meet schedules or to resolve complex problems. E2 personnel also provide direct supervision to professionals and/or skilled labor, develop work schedules, and monitor work flow to achieve established goals and objectives.



## DOE Columbus Closure Project

E2 was challenged to minimize cost and maintain schedule while dispositioning nearly four (4) times the amount of waste initially anticipated. E2 worked with the DOE (Ohio Field Office and HQ) for 10 months during project startup to gain approval to ship soil and debris with deminimus levels of radioactive material to licensed waste processors in the State of Tennessee, saving approximately \$3.8 million. We also implemented an intermodal to gondola car transfer operation, which reduced the number of intermodals needed in the fleet by over 85% and saved the customer an additional \$1.9 million.

“As one of the first Small Business incentive-based closure contracts, the Columbus Closure Project is an excellent model for future closure contracts”  
- Mr. Robert Warther,  
DOE Ohio Office Field Manager