

InstaCote



ENGINEERING SERVICES & ENVIRONMENTAL COATINGS

PROJECT PROFILE

Project: Rocky Flats, Golden, Colorado Date: February, 2002 – Site Closure

Project Contractor: Kaiser-Hill (CH2M-Hill)

Engineers: Richard (Dick) Hogue, Rock Neveau

Scope of Work:

Design and implement a system for shipping oversize radiological contaminated pieces of equipment.

One of the major challenges involved in closing Rocky flats is the disposal of large pieces of equipment contaminated with radioactive and hazardous materials. Past practice was to size-reduce the equipment into a smaller dimension that would fit into standard waste containers. Size reducing large equipment is extremely labor-intensive and exposes workers to significant industrial safety, chemical and radiological hazards.

A packaging system that would accommodate large equipment was needed that would meet the definition of a Strong-Tight Industrial Package as required by the CFR's and be suitable for shipping low level waste. Scope of support included engineering design for polyurea packaging system, nuclear safety determinations on equipment, waste categorization and characterization, and primary site interface with regulatory agencies and waste repositories

Application technique:

A base shaped to match the footprint of the equipment is sprayed with InstaCote SE polyurea. The equipment is placed on top of this base and covered with shrink wrap plastic. The shrink-wrapped equipment is then sprayed with InstaCote SE, completing the package.

Results:

After a technical review by the DOE, the InstaCote method of packaging was formally accepted by the DOT and the Nevada Test Site as an approved waste packaging method. The use of InstaCote SE for packaging over-size equipment saved countless person-hours in labor, budget and schedule. More than thirty large packages were shipped from Rocky Flats both by rail and over-the-road; with the largest package weighing more than 400,000 pounds. Oakridge, Fernald and other sites have implemented this approach.