

InstaCote



ENGINEERING SERVICES & ENVIRONMENTAL COATINGS

PROJECT PROFILE

Project: Oak Ridge National Labs (ORNL) Date: Fall 2011
Project Contractor: University of Tennessee - Battelle, Oak Ridge, Tennessee
Bldg. 4507 High Level chemical Development Facility

Engineers: Tommy Minor; Mike Harper

Scope of Work:

Building 4507 is a former radioisotope high level chemical development facility at ORNL. This facility is no longer in production and will eventually be demolished. The facility has four radiological contaminated cells with isotopes of curium-244, americium-241, strontium-90, cesium-137 and PU. The goal was to stabilize the contamination in these cells for an indeterminate period of time until demolition..

As entry in to these cells was not an option for the purpose of fixing the contamination, a remote stabilization technology was needed.

Products used:

CCLV Fix is a water based non hazardous non toxic latex based coating developed by InstaCote to solve this problem. The first demonstrated use of CCCLV Fix in contaminated areas was this project. The use of this fixative controls both airborne and loose contamination on surfaces using remote application methods. When cured the result is a hard permanent coating;.

Application technique:

The cells were sealed using plastic and tape and the exhaust ventilation was reduced to minimize air changes. A (DynaFogger™) was used to aerosolize the CCLV Fix into a fine mist which was remotely delivered in to the cells. The air in the cells was saturated depositing a coating over all the surfaces which dried to provide a hard coating.

Results:

Pre-Fogging Smear Results			Post-Fogging Smear Results		
Location	Alpha	Beta/Gam ma	Location	Alpha	Beta/Gam ma
Cell 1	448	85,000	Cell 1	< 20	231
Cell 2	164,179	3.2e7	Cell 2	83	293
Cell 3	164,179	6.4e6	Cell 3	24	487
Cell 4	2,612	840,000	Cell 4	< 20	< 200

Smear results listed in dpm/100cm²

The use of *Dynafoggers*® and garden sprayers to remotely apply InstaCote CCLV FIX in other contaminated areas at ORNL facilities is becoming a standard engineered control prior to any work activity.