BCLDP CEMP

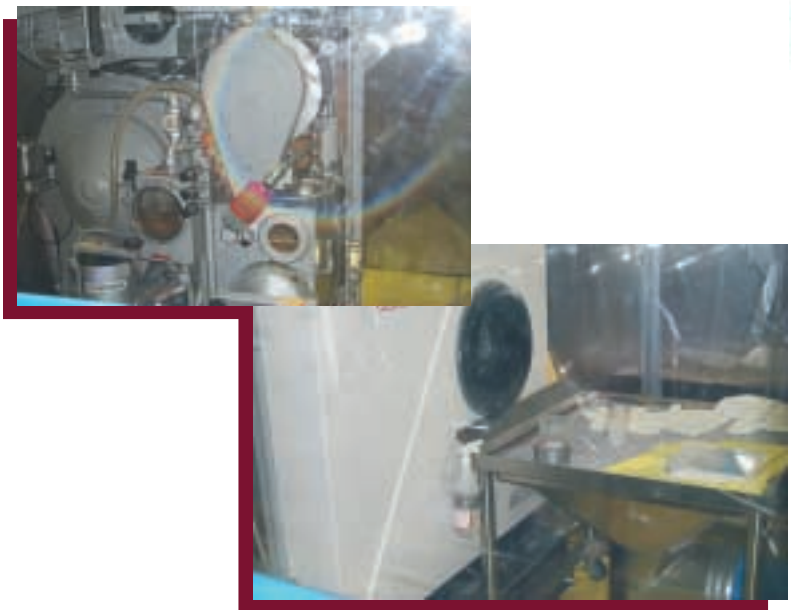
The Battelle Columbus Laboratories Decommissioning Project | Columbus Environmental Management Project

Transuranic Waste Laundry System

Savings = $1.6 million

Problem/Need

Disposal options for transuranic (TRU) waste are limited, and its required characterization can be expensive. Cloth materials, such as mop heads and rags, can easily become contaminated to higher levels because of their light weight. A process that can reduce the level of or remove contamination on such items without generating significant secondary waste can be very beneficial during hot cell decontamination.

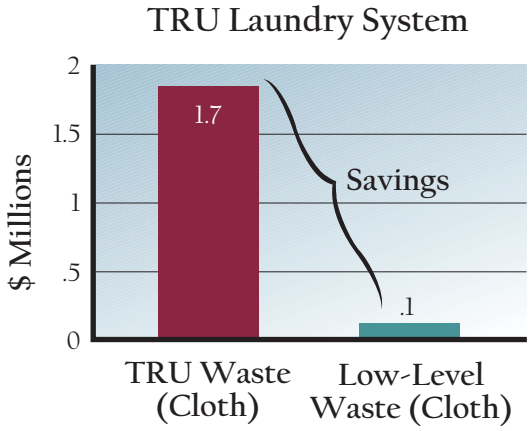


Technology Description

A laundry system with automated controls is being used by the Battelle Columbus Laboratories Decommissioning Project (BCLDP) to decontaminate TRU-contaminated cloth material. In this closed loop system, radioactive particles are carried by the working fluid from the material in the cleaning chamber to an external bag filter, where they are collected along with lint and any other solid materials. After passing through the bag filter, the working fluid is recycled to the cleaning chamber. Some cloth items can be reused because decontamination ratios in excess of 25:1 are possible.

Benefits

The laundry system controls contamination by containing both the working fluid and the contaminants during cleaning. The only loss of the working fluid is the residual amount that remains on the cloth materials when they are removed from the system. The external bag filter can be changed with radioactive material in it. By reducing the amount of TRU waste for disposal, the system will save BCLDP approximately $1.6 million.



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