

Title:
Dynamic Radiological Inventory Control at the Tank W-1A Remediation Project

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ABSTRACT

Tank W- 1 A is a remediation project located within the main campus of the Oak Ridge National Laboratory (ORNL). Tank W- 1 A was installed in the 1950s and removed from service in 1986. While in service, Tank W- 1A collected wastes from several high radiation level analytical facilities at ORNL. During its operation, transfer lines to Tank W-1A leaked, causing soil and groundwater contamination in the vicinity of the tank. Remediation activities currently within the scope of the Tank W-1A Removal Action includes removal of the contaminated soil, Tank W-1A itself, and the concrete saddles and pad that support the tank. Daily activities and container tracking include packaging, non-destructive assay, lid changes, loading and shipping – each with varying inventory restrictions protected by Specific Administrative Controls.

The Tank W-1A Detailed Inventory Spreadsheet (TWDIS), an Excel spreadsheet has been constructed to control and track the dynamic inventory of Tank W-1A boxes of soil and/or drums of TRU waste staged within the Tank W-1A property boundaries. The TWDIS contains warning notes for the user when the container count exceeds 80% of the appropriate DSA limit; therefore the user has advanced warning to prevent inadvertent exceedance of the respective DSA limit.

The spreadsheet is a cost-effective yet rigorous method for maintaining the protected assumptions listed in the Documented Safety Analysis and flowed into the Technical Safety Requirements.