

Defense-Related Uranium Mines Program

Brent Lewis, U.S. Department of Energy (DOE), Office of Legacy Management

The Defense-Related Uranium Mines (DRUM) Program provides the structure and basis for the U.S. Department of Energy, Office of Legacy Management (LM), to perform the verification and validation (V&V) of DRUM that provided ore to the U.S. Atomic Energy Commission from 1947 to 1970. The V&V activities are conducted to fully understand the scope of potential problems posed by these abandoned mines by determining their location, reclamation or remediation status, and potential impacts to public safety, human health, and the environment.

In 2014, after consulting with other Federal agencies, affected states and tribal nations, and the interested public on abandoned uranium mines, LM submitted the *Defense-Related Uranium Mines Report to Congress*. Following 18 months of intergovernmental coordination, the report concluded there are still numerous data gaps associated with abandoned uranium mines regarding location, status, and environmental condition. The DRUM program was established and developed numerous plans detailing programmatic requirements (e.g., objectives, methods, safety, quality, and data management).

DRUM activities include: verification of actual mine locations in the field; inventory of mining-related features and assessment of physical hazards; collection of radiological data (gamma surveys), soil samples, and water samples (when applicable); screening of mines using a risk-based screening approach; and reporting the results of these activities to partner agencies. Reports are written to summarize the data and present a risk ranking of physical, radiological, and chemical hazards using a multiple lines of evidence risk-screening approach for each mine site. LM and their partner agencies use the reports to assess mine safety closure and restoration priorities and to determine if any further action is warranted.

The initial 5-year campaign (Campaign #1) focuses on approximately 2,500 DRUM, 58% of the total mines initially identified, and utilizes a recreational land-use scenario. To date, over 1,300 mines have been inventoried. Through a process of collaboration and concurrence, the agencies will determine the priority and optimize available resources to reclaim the identified hazards. Initiation of a second campaign to address DRUM located on tribal, state, and private land will be implemented by 2023.