

**2017 Mo-99 TOPICAL MEETING ON  
MOLYBDENUM-99 PRODUCTION TECHNOLOGY DEVELOPMENT**

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**Los Alamos National Laboratory Capabilities to Support the  
Development of Domestic Mo-99 Production**

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**ABSTRACT**

Los Alamos National Laboratory (LANL) has been supporting the development of commercial domestic U.S. production of  $^{99}\text{Mo}$  as part of the National Nuclear Security Administration (NNSA) office of Materials Minimization and Management ( $M^3$ ) program to accelerate the establishment of a reliable domestic supply of  $^{99}\text{Mo}$  without the use of highly enriched uranium (HEU). Some of the laboratory capabilities we have been able to apply to these projects has included: high-power accelerator target design and fabrication, cooling system design and development, coupled neutronics and thermal hydraulics modeling, actinide chemistry, tritium systems, uranium accountability and control, subsystem testing, and system modeling. This presentation will give an overview of LANL's capabilities for supporting the development of domestic Mo-99 production.