

Safeguards and Spent Nuclear Fuel

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Abstract: The International Atomic Energy Agency (IAEA) is responsible for ensuring the timely detection of diversion of nuclear material from peaceful nuclear programs to illicit weapons programs. This mission is accomplished largely through implementation of safeguards. In the NEN-1 Safeguards Science and Technology group at Los Alamos National Laboratory, we support the IAEA in this crucial mission through development of nondestructive assay (NDA) technology and analysis methods. This talk will provide a brief introduction to international safeguards and NDA, and will present two NDA-based methodologies for safeguarding spent nuclear fuel, the most challenging of nuclear materials to measure.