Safeguards Laboratory

Description

The Safeguards Laboratory is a facility that encompasses nondestructive assay (NDA) capabilities including equipment, materials, and expertise for material control and accountancy (MC&A) purposes. The lab provides a platform for conducting radiological measurement activities by providing traceable nuclear material standards and unique detection systems in a flexible R&D setting. Industrial equipment mock-ups allow the accurate simulation of real-world conditions for training and testing. The lab's openness and availability to the private sector enable new technologies to be developed to combat the proliferation of weapons of mass destruction.

Applications

- International Outreach and Training
- Nondestructive Assay Measurements
- Instrument Evaluations
- Integrated Safeguards Methodologies
- Measurement Technique Development

Specifications	
Gamma and X-ray detection systems	Hybrid K-Edge Densitometer, Segmented Gamma Scanner, ISOCS, Tomographic Gamma Scanner (TGS)
Neutron detection systems	Cf Shuffler, AWCC, Differential Die-Away Package Monitor
Multi-channel analyzers	InSpector 2000, DigiDart, MCA166
Instruments	Thickness gauges, oscilloscopes, bar code readers
Process equipment mock-ups	Cylindrical ducts HEPA filter enclosure Pipe array Large rectangular duct with flow diverters
Enrichment software	WinU235, NalGEM, MGAU, FRAM
Radioactive sources	~600 g of enriched U (93% to 0.31% ^{235}U) Range of other gamma and neutron emitting sources

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Date: April 2017, R2