



The Sandia Center for Global Security and Cooperation

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Exceptional service in the national interest



GLOBAL SECURITY CHALLENGES

Proliferation | Arms Control
Weapons of Mass Destruction | Public and Animal Health

NUCLEAR



CHEMICAL



BIOLOGICAL

Sandia's engagement addressing global security challenges spans over 50 years

1950s

1960s

1970s

1980s

1990s

2000s

2010s

Stockpile growth
-
Origins of global nonproliferation efforts

Unilateral arms control treaty monitoring architectures

Deeper arms control and nonproliferation policy obligations
-
Emergence of trans-national terrorism

Bilateral treaty monitoring architectures

Post-Cold War policy transition

The Global War on Terror

Resurgence of state-level threats
-
Evolved non-state threats

West Africa Ebola epidemic response
-
Safeguards studies

Physical Protection System design methodology

Technical support to INF, START treaty verification efforts

Cooperative Monitoring Center established

Cooperative Threat Reduction
-
Second Line of Defense Initiative

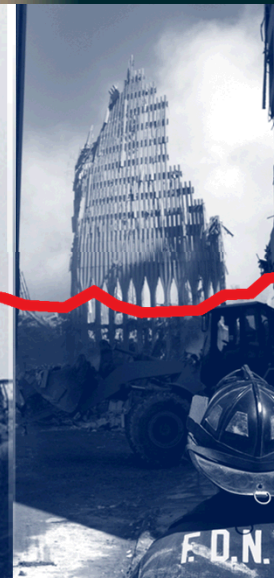
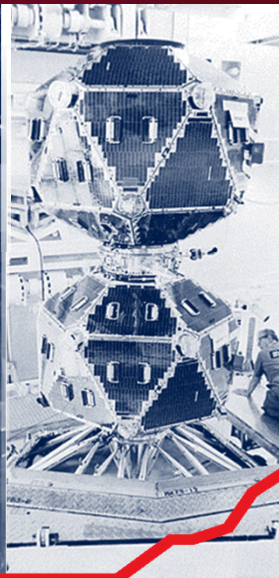
Weapons production and manufacturing engineering

VELA-Hotel

The Cold War

Post-Cold War

Post-9/11



% Non-Nuclear Weapons Funding



The Sandia Center for Global Security and Cooperation

We seek a SAFE, SECURE
WORLD through Global
Technical Engagement.



RESEARCH, DEVELOP, AND
APPLY innovative SCIENCE
AND ENGINEERING
SOLUTIONS to strengthen
nonproliferation and reduce
global threats.

ENDURING PARTNERSHIPS

POLICY ENGAGEMENT

SYSTEM SOLUTIONS

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RESEARCH and DEVELOPMENT

SYSTEMS ANALYSIS

ENGINEERED SOLUTIONS

- ENDURING PARTNERSHIPS
- POLICY ENGAGEMENT
- SYSTEM SOLUTIONS



- RESEARCH and DEVELOPMENT
- SYSTEMS ANALYSIS
- ENGINEERED SOLUTIONS



Gulf Nuclear Energy Infrastructure Institute (GNEII)

UAE, Khalifa University, and Texas A&M

Collaborating Centre for the World Organisation for Animal Health



Middle East Scientific Institute for Security (MESIS)
A legacy of Sandia's Cooperative Monitoring Center (CMC)

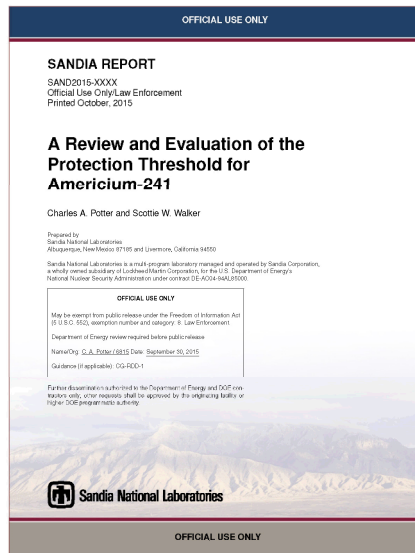
- ENDURING PARTNERSHIPS
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National Biorisk Management



South Asia Missile Dismantlement Transparency

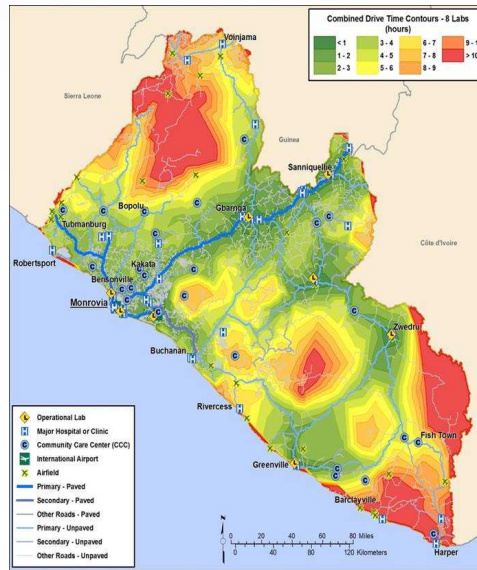
Americium-241 Protection Threshold Study

- ENDURING PARTNERSHIPS
- POLICY ENGAGEMENT
- SYSTEM SOLUTIONS

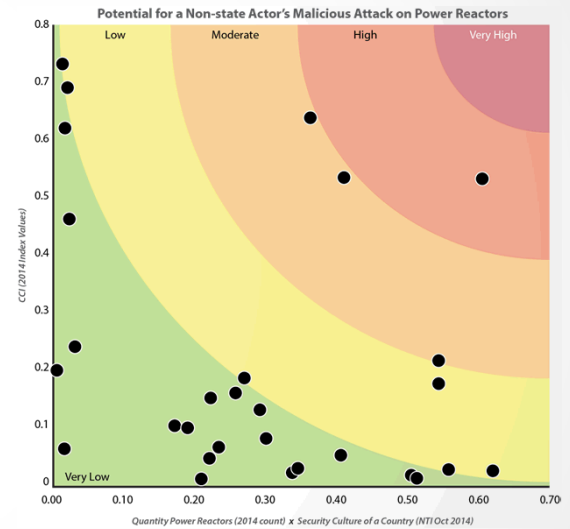


- RESEARCH and DEVELOPMENT
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Support for response efforts during 2014 West African Ebola outbreak



Threat-Based Vulnerability Prioritization



Mobile Radiation Detection and Identification System (MRDIS)

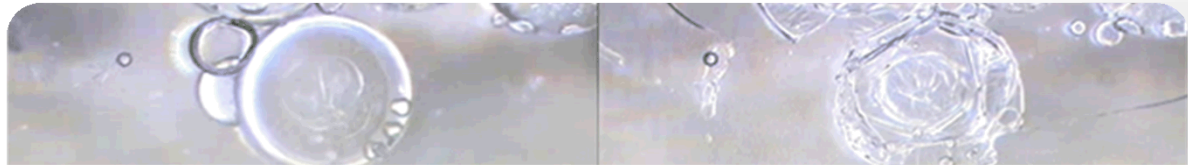
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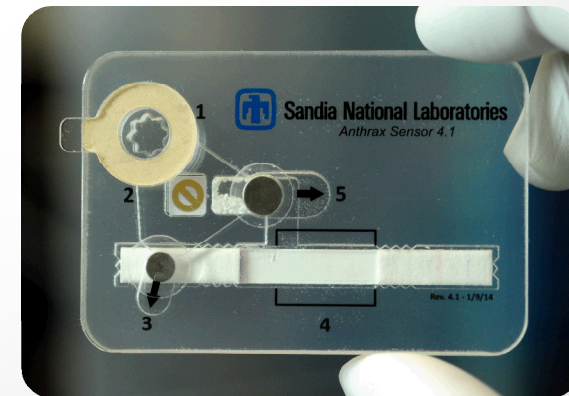
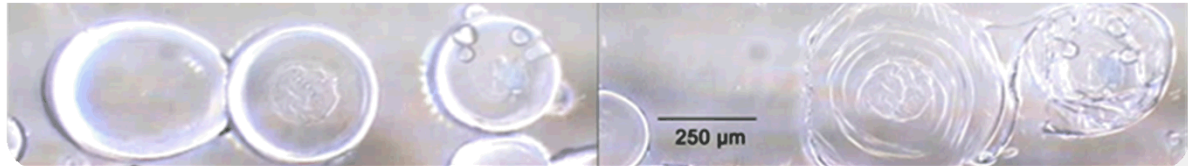
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In-Device Delay (IDD) kit development



Tamper-Indicating Bleeding Materials



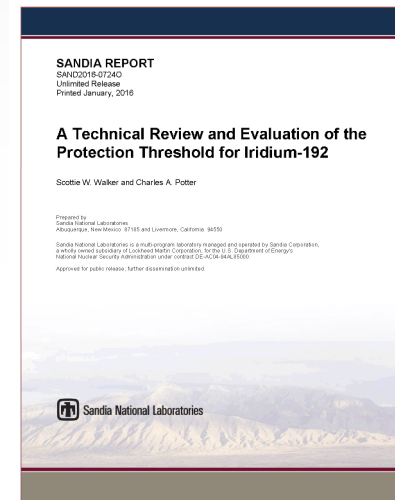
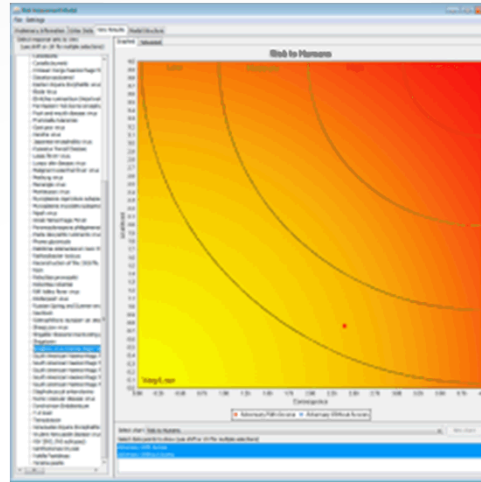
Portable anthrax detector (BaDx)

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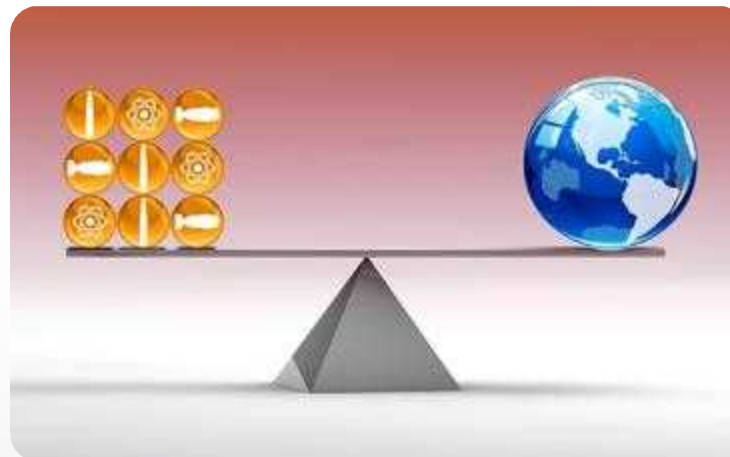


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Biorisk Assessment Models (BioRAMs)



Analysis of security threshold values associated with Ir-192

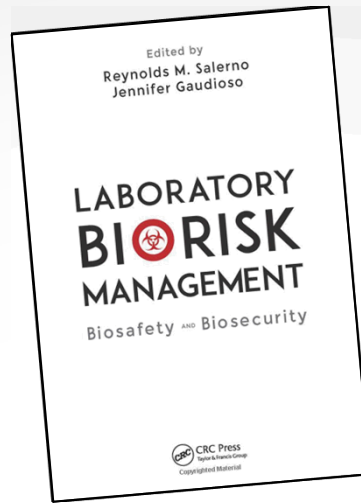


Studies on balancing proliferation and deterrence

- ENDURING PARTNERSHIPS
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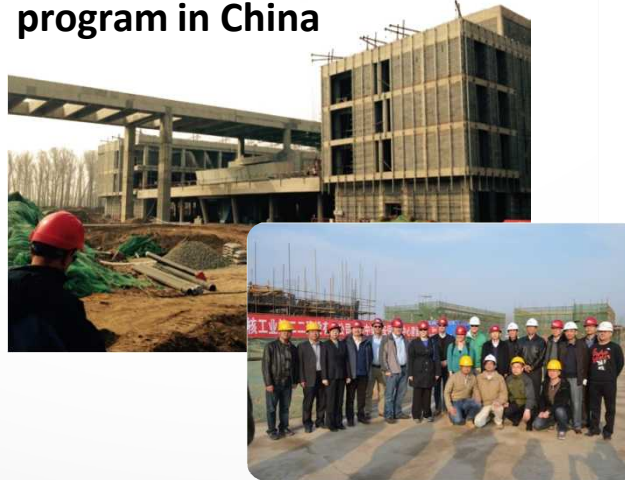
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New approaches to laboratory biosafety and biosecurity

Radiation Detection Equipment for Warhead Treaty Verification

Material Protection, Control, and Accounting (MPC&A) program in China



Our systems approach enables Science & Technology to both inform and implement policy...

National Nonproliferation Systems



International
Treaties and
Negotiated
Agreements

Global Cooperative Threat Reduction

... and focuses on risk reduction

Questions?

