

33rd ESARDA Annual Meeting

Symposium on Safeguards and Nuclear Material Management

INMM: Looking to the Future in Nuclear Materials Management

Ken B. Sorenson, Vice President
Institute of Nuclear Materials Management

May 17, 2011
Budapest, Hungary

Best practices organizations like INMM and ESARDA must be flexible and responsive to the dynamic world of nuclear materials management.

The evolving linkages between proliferation risks, nuclear capabilities in non-weapons states, and legitimate use of civilian nuclear power create an environment that requires constant assessment how we conduct our business.

How will we respond?



Both organizations have recently engaged in strategic planning efforts to better align their organizations with the dynamic world of nuclear materials management:

- INMM – Strategic Planning Working Group on Organizational Structure
- ESARDA – Reflection Group 2010

A core component of the INMM strategic planning was an Externality Analysis. Specific aspects considered in this analysis included:

International Oversight Activities

- IAEA
- UN resolutions, IAEA documents and protocols
- G8
- Reaffirmation of NPT, FMCT, START
- Europe
- Euratom, ESARDA, WINS



*G8 Summit, July 2009
L'Aquila, Italy*

Growth of Civilian Nuclear Power

- Asia
- Strong growth in China, South Korea, India, Japan
- Middle East
- Strong interest shown across the Middle East evidenced by the signing of numerous bi-lateral agreements
- U.S.
- License applications and expressions of interest remains strong
- 1 new enrichment facility on-line and 3 more licensing activities underway

U.S. Centric Issues

- Administration position
 - "...nuclear terrorism is the most immediate and extreme threat to global security." Quote from Mark Lippert, Chief of Staff of the National Security Council
 - Reduce and eliminate nuclear weapons
 - Ratify the CTBT
 - Begin negotiations on a FMCT
 - Secure all loose nuclear materials in the world within 4 years
 - Halt proliferation to new States
 - Negotiate/replace START
 - Strengthen the NPT
 - Global Nuclear Summit, Wash DC, March 2010
 - Cancel the Yucca Mountain spent fuel repository project
- Department of Energy
 - Continue efforts on securing Nuclear Weapons Complex (material consolidation, PP, cyber-security, security forces)
 - Continue Global Threat Reduction Initiative
 - Construction of MOX facility in South Carolina
 - R&D on fuel cycle alternatives



Obama Prague Speech
April 2009

Questions arising from these linkages

- Non-proliferation and Commercial power production
 - How do we allow expansion of nuclear power while minimizing the risks of technology and materials proliferation?
 - What roles do bi-lateral treaties have in managing this balance?
 - What roles do commercial organizations such as the Nuclear Suppliers Group have in minimizing these risks?
 - What roles do the weapons states have?
- Physical protection and commercial power production
 - How do we transfer traditional PP protocols from a weapons protection strategy paid for by governments to protection requirements paid for by private industry?
 - How do we integrate PP requirements across international boundaries as the fuel cycle becomes increasingly global?

Externalities Analysis – Observations

- The concern over nuclear materials management is global
- There is a strong emphasis on treaty ratification and verification
- There is strong U.S. engagement to minimize proliferation risk while encouraging commercial expansion of nuclear power
- There are four major forces driving the future of nuclear materials management;
 - Concern over terrorism since 9/11
 - Dramatic reduction in the nuclear weapons stockpile
 - Concern over a growing number of potential nuclear weapons capable countries acquiring nuclear materials/capabilities
 - Dramatic increase in commercial nuclear fuel cycle development
- The current INMM Technical Divisions seem to address the majority of these externalities
- However, changes are recommended to strengthen the overall Technical Division portfolio in light of these externalities, particularly as they relate to the commercial fuel cycle.

INMM Technical Division Structure

Old Structure	New Structure Based on Externalities Analysis
International Safeguards	International Safeguards
MC&A	MC&A
Non-proliferation and Arms Control	Non-proliferation and Arms Control
Physical Protection	Nuclear Security and Physical Protection
Packaging & Transportation	Packaging, Transportation, and Disposition
Waste Management	Facility Operations

Two new Standing Committees have also been established

- **Strategic Planning**
- **Education and Training**

INMM is committed to working closely with our international partners in the constant effort to improve best practices in nuclear materials management

International Atomic Energy Agency

- INMM has Standing Observer Status at the IAEA General Conference

World Institute for Nuclear Security

- INMM has a seat on the Board of Directors
- INMM is a sustaining member of WINS
- Joint WINS/INMM workshop on human reliability, Fall 2011, Sellafield

International INMM Chapters

- Japan
- Korea
- Morocco (New!)
- Obninsk
- Russian Northwest
- United Kingdom
- Ukraine
- Urals
- Vienna

INMM's relationship with ESARDA is strong and broad reaching

Joint Meetings

- Ispra 1984
- Arona 1996
- Albuquerque 1998
- Tokyo 2000
- Como 2003
- Santa Fe 2005
- Tokyo 2008

Joint Training

- Nuclear Non-proliferation and International Safeguards Training Workshop: July 2011, Palm Desert, CA

INMM Annual Meetings

- Hosts joint sessions

Conclusion

INMM looks forward to a lasting and growing partnership with ESARDA in working together to improve the world of nuclear materials management in order to facilitate continued safe and secure expansion of civilian nuclear power while minimizing proliferation and security risks.

