Present Status of Cooperation in Nuclear Forensics
ITWG and EU Activities

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Contents

• Nuclear Forensics is a highly specialized discipline in science
• Only few cases per year are subject to detailed nuclear forensics investigation
• Only few laboratories around the world sophisticated nuclear forensics capabilities

Need for cooperation
• Advancing the science
• Ensuring smooth interaction
• Providing support
Background to ITWG

- ITWG was founded as a result of a G-8 initiative (Ottawa Summit 1995 and Moscow Nuclear Security Summit 1996) under the NPEG (Non Proliferation Experts Group)
- Today, ITWG reports informally to G-8’s Nuclear Safety and Security Group
- ITWG is open to all states interested in nuclear forensics (currently 30 countries)
- ITWG is an informal association of nuclear forensics practitioners
- Regulatory Authorities, law enforcement, radiation protection, measurement laboratories
- ITWG also works together with the International Atomic Energy Agency
Terms of reference of the ITWG

- Identify and prioritize techniques and methods for forensic analyses of
  - seized **nuclear materials** to answer questions regarding sources and the intended use of these materials
  - non-nuclear materials associated with seized nuclear and radiological evidence

- Improve technical capabilities for collection and preservation of evidence, initial on-scene categorization, identification of applicable laws and statutes, and assistance in **nuclear forensic investigations**

- Formulate and execute **interlaboratory exercises** to evaluate and improve forensic analysis of seized nuclear materials
**ITWG Task Groups (1/2)**

ITWG Executive Committee is represented by members from the European Commission, the United States, Hungary, France, and Great Britain

1. **Evidence Collection Task Group** concentrates on post-incident management with focus on preservation of evidence; proposing a *catalog of national first responder exercises*

2. **Guidelines Task Group** is developing *consensus guidelines* that can be referenced by analytical laboratories represented at ITWG meetings; guideline developed for both techniques (e.g. mass spectrometry) and materials (e.g. uranium oxide)

3. **Communications, Outreach and Training Task Group** maintains close ties with IAEA, European Networks of Forensic Science Institutes, Europol, Interpol, the FBI and World Customs Organization; we have launched a *secure web-site* to facilitate exchange of information and an *open web-site.*
4. Exercise Task Group designs and organizes analytical and scenario-based **training exercises** to improve nuclear forensics response; ITWG conducted analytical exercises involving plutonium in 1998-2000 and highly enriched uranium in 2000-2002. A third exercise has just been completed.

5. Task Group on Libraries encourages the development of national compilations of **relevant data or archive samples** on nuclear material for supporting nuclear forensics interpretation.
Summary - Nuclear Smuggling
International Technical Working Group

• ITWG as an informal group has maintained continuity and progress over fifteen years
• Aims at advancing the science of nuclear forensics and providing a common approach
• ITWG established Nuclear Forensics as integral part of response process
• Multi-agency, interdisciplinary and international group
• Nuclear Forensics provides sustainability in combating illicit trafficking of nuclear material
• Operational support

• Nuclear Security related Training: establishing a European Nuclear Security Training Center

• Cooperation in Nuclear Forensics
  - Exchange of best practices
  - Joint exercises, joint analysis
  - Support the creation of regional networks
  - Support establishing core capabilities in nuclear forensics
Nuclear Forensics Operational Support

Nuclear Forensics Laboratory

Legal Basis
- Framework Agreement
- Collaboration Agreement
- Specific Contract
- Exchange of Letters
- IAEA NSS No.2

Requesting Parties
- EU Services
- EU Member States
- Other States
- IAEA
- Political level (e.g. Ministry for the environment)
- Law enforcement (e.g. police, prosecutor)
- Other Authority (e.g. office for radiation protection)