

Toward the Establishment of a Nuclear Forensics System in Japan



October 5, 2010

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Office for Non-Proliferation and Safeguards

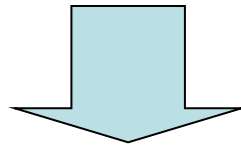


MEXT

MINISTRY OF EDUCATION,
CULTURE, SPORTS,
SCIENCE AND TECHNOLOGY-JAPAN

Nuclear Forensics: Objectives

- * Determine attribution
- * Identify locality of nuclear materials,
by analyzing samples taken from stolen materials,
or at the scene of nuclear terrorism



- * **Prosecute criminals**
- * **Enhance deterrence power**

Why Should Japan develop forensics technology?

- Increasing terrorist threats
- Japan has a record of the stable use of nuclear energy for peaceful purposes
- To contribute to the international community by utilizing Japan's vaunted analytical ability and advanced technology in infinitesimal quantities of NM

Japan-U.S. Joint Statement toward a World without Nuclear Weapons

“Japan-U.S. Joint Statement toward a World without Nuclear Weapons,” agreed and released at the US-Japan Summit meeting on November 13, 2009

Nuclear Non-Proliferation & Peaceful Uses of Nuclear Energy

The GOJ and USG intend to expand nuclear non-proliferation, safeguards, and security cooperation, which may include areas such as nuclear measurement and detection technologies, [nuclear forensics](#), human resource development, training and infrastructure assistance for countries interested in nuclear energy, and coordination of our respective Member State support programs to IAEA safeguards.



Communiqué of the Washington Nuclear Security Summit, April 2010

9. Recognize the need for cooperation among states to effectively prevent and respond to incidents of illicit nuclear trafficking; and **agree to share**, subject to respective national laws and procedures, **information and expertise through bilateral and multilateral mechanisms in relevant areas such as nuclear detection, forensics, law enforcement, and the development of new technologies;**



Japan's National Statement at the Nuclear Security Summit

(B) Development of Technology related to Measurement and Detection of Nuclear Material and Nuclear Forensics based on International Cooperation

As Japan and the U.S. recently reached agreement on cooperation in the development of technology that contributes to the advancement of the measurement and control of nuclear material, as well as technologies related to the detection of nuclear material and nuclear forensics that contribute to the identification of the sources (countries and facilities) of nuclear material illicitly trafficked or used in terrorist attacks, Japan will make increased contributions to the international community by establishing these technologies with more precise and accurate capabilities in detection and forensics within an approximate three year time frame and sharing the fruits of these new technologies with the international community.

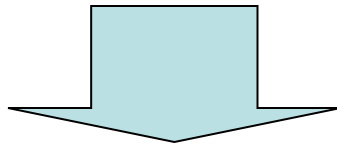
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Reorganization within MEXT

To address nuclear non-proliferation and international cooperation.

Japan Safeguards Office

- Domestic Safeguards



Office for Non-Proliferation and Safeguards

- Domestic safeguards
- Nuclear non-proliferation
- International cooperation

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Nuclear Forensics Technologies

- Enhancement of technologies for analyzing NM in various chemical forms, impurities, and mixed materials
- Establishment of U age determination technology
- Establishment of the database

R&D Themes

- Measurement of nuclear materials and other radioactive materials
- Age determination of U & Pu
- Impurity analysis
- Configuration analysis
- Database development

Need for International Cooperation

- Mutual use of forensics databases
 - Database Network

- Information exchange on forensics technology
 - Handling of classified and sensitive information
 - Discussions at the ITWG, IAEA

Japan's Final Goal

- Domestic goal
 - Reinforce National Forensics System through establishment of Nuclear Forensics
- International goal
 - Help global initiative in tackling Nuclear Terrorism

Let's find novel signature
in this workshop
for further cooperation!