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Development of Nuclear Forensics Capabilities in Japan

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According to the IAEA technical guidance for nuclear forensics (NF) starting from incident response and going to sampling, distribution, analysis and finally interpretation in illicit trafficking of nuclear and other radioactive materials [1], NF laboratory has to enable the identification of unique characteristics in the seized materials, to provide investigative leads and support prosecution outcomes and then to enhance State security. Japan Atomic Energy Agency (JAEA) has started the development of analytical techniques for establishment of the NF laboratory with responsibilities to accomplish the analytical techniques such as isotope ratio measurement, impurity measurement, particle analysis, uranium age determination and development of a prototype national NF library against illicit trafficking of nuclear and radiological materials. In the conference, capabilities of the NF technologies in Japan will be presented in order to share our experience with international NF community. Need to establish international cooperation regime on realistic NF approach will also be discussed in this paper.

Reference

[1] IAEA Nuclear Security Series No.2, Nuclear Forensics Support, Technical Guidance, STI/PUB/1241, 2006.

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