

**P46 NUCLEAR FORENSICS: STRATEGIES AND ANALYTICAL TECHNIQUES**

J.E.S. Sarkis<sup>a</sup> and D.A. Andrade

<sup>a</sup> [jesarkis@ipen.br](mailto:jesarkis@ipen.br)

Nuclear and Energy Research Institute, São Paulo, Brazil

Education and training in all levels, in nuclear security, show up as an important tool to the prevention, detection and response to theft, sabotage, unauthorized access, illegal transfer or other malicious acts involving nuclear material or radioactive substances and associated facilities. The responsibility for establishment, implementation, and maintenance of nuclear security within a State rests entirely with that State. Appropriate training and education at all levels and in all relevant organizations and facilities can play a major role in this process. In order to achieve this goal it is necessary to establish a systematic and comprehensive program for education and training based on well-established international experience.

**P44 APPREHENSION OF THORIANITE IN BRAZIL: A NUCLEAR FORENSIC PERSPECTIVE**

J.E.S. Sarkis<sup>a,1</sup>, M.R.L. Nascimento<sup>2</sup>, A.L. Quinelato<sup>2</sup> and N.C. Silva<sup>2</sup>

<sup>a</sup> [jesarkis@ipen.br](mailto:jesarkis@ipen.br)

<sup>1</sup>Nuclear and Energy Research Institute, São Paulo, Brazil

<sup>2</sup>Laboratory of Poços de Caldas, Brazil

Thorianite is a strongly radioactive thorium's mineral (ThO<sub>2</sub>) which often contains uranium, lead and rare earth elements. It is a very heavy, hard, and colored dark gray to brownish black or bluish black. In the environment can be found in pegmatite, beach sands, and alluvial deposits. Despite to be considered a rare mineral it can be found in several parts of the world. The main occurrence areas in Brazil are alluvial deposits located in the Municipalities of Porto Grande, Serra do Navio and Pedra Branca in the Amapa State (Amazon Rainforest). Besides thorium, the mineral has high contents of uranium, lead and rare earths which represents an important commercial and strategic value. During the last decades several tons of this mineral have been apprehended by Brazilian Federal Police. This situation is extremely serious considering that these numbers just represent a very small part of the total of the smuggled amount. The main questions are : Who? To whom? and With which objective? This paper will present the more recent data and a nuclear forensic perspective of the nowadays situation.

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