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## **e-Gamma - Nuclear Material Accountancy and Control System in Brazil**

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The Brazilian Nuclear Energy Commission (CNEN) is the government organization responsible for regulating all nuclear activities in Brazil and for ensuring that international safeguards are implemented according to the international agreements.

In 2006 CNEN initiated a project aiming at the development and implementation of a web based system (e-Gamma) for on line nuclear material accountancy and control. In January-2014, after 3 years of beta testing, e-Gamma finally became the official nuclear material accountancy system in Brazil.

e-Gamma is a web system hosted in a dedicated server under a secure environment maintained at CNEN headquarters. Secure access is provided by the use of Digital Client Certificate and internal user pre-authorization for login as well as multiple access profiles each one with specific function menus.

The System operation is based on source documents for each inventory change prepared and updated by the MBA operators with the help of specific forms with strong validations. After the document conclusion the System records the inventory change in a general ledger.

Monthly the officers of CNEN analyses the general ledgers of each MBA and generates the applicable reports through the System (Inventory Change Reports - ICR, Physical Inventory List -PIL, and Material Balance Report - MBR).

The System allows the running of managerial queries and has brought to CNEN much more control and traceability of the inventory changes and significant reduction in typing errors, costs and inspection efforts. Therefore, more efficient accountancy verification procedures at national and international levels are expected, as well as remote accountancy verification previous to an inspection.

The proposed paper will describe the e-Gamma System, its main features and the oral presentation will contain a brief demonstration of some functionalities through the use of a local version installed on a notebook.

### **Country or International Organization**

Brazil

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