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Nuclear Material Accountancy Network Analysis at Scale

Nuclear Material Accountancy is a key pillar of the Safeguards system. The information provided by the State through Nuclear Material Accountancy is used for material balance evaluations as part of the tools used by Safeguards in the detection of the diversion of declared nuclear material. Material balance evaluations can be enhanced by performing network analysis in order to identify various types of declarable activity. In the past, network analysis has resulted in inquiries to some States pursuant to Article 4.d of the Additional Protocol, and have resulted in Complementary Access visits to locations under Article 5.c of the Additional Protocol. In some cases, this has led the Safeguards department and the applicable States to identify new Locations Outside Facilities that are to be declared under the Comprehensive Safeguards Agreements, and in other cases, identify new sites that are declarable under the Additional Protocol. In this paper we present a scalable approach consisting of network analysis using a new tool called Nuclear Material Explorer that can be used by the Safeguards department. This tool is part of the Collaborative Analysis Platform (CAP).

Which "Key Question" does your Abstract address?

TEC3.4

Which alternative "Key Question" does your Abstract address? (if any)

TEC3.3

Topics

TEC3

Primary author: Mr CALLE, Daniel (IAEA - Department of Safeguards (SGIS))

Co-authors: Mr WILSON, Benjamin (IAEA - Department of Safeguards (SGVI)); Mr GAGNE, Danny (IAEA - Department of Safeguards (SGIS)); Mr DE FUSCO, Flaviano (IAEA - Department of Safeguards (SGIS)); Ms IANCU, Irina Valentina (IAEA - Department of Safeguards)

Presenter: Mr CALLE, Daniel (IAEA - Department of Safeguards (SGIS))

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