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Capabilities of the Acquisition Path Analysis Tool (APAT) for Integration of Multi-source Data

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The International Atomic Energy Agency (IAEA) continually seeks to improve its safeguards implementation to better utilize the expertise of Agency staff. With the State Level Concept, there is a paradigm shift from a prescriptive approach to safeguards implementation to one that allows for more flexibility in optimizing IAEA resources. This evolution in safeguards improves the IAEA's ability to consider the State as a whole through a more integrated evaluation process.

The Acquisition Path Analysis Tool (APAT) has been developed at Los Alamos National Laboratory as a prototype system to demonstrate the usefulness of this kind of tool to support implementation of the State Level Concept. APAT is analysis software that represents the nuclear fuel cycle as a directed graph based on the IAEA Physical Model and provides users with a mechanism for integrating all information compiled through the State evaluation process. It allows for the evaluation of plausible acquisition paths for fissile material in a State, prioritizes them based on safeguards relevant information, and provides users with a dynamic suite of tools for planning and implementation of verification activities. The goals of APAT are to improve resource allocation for more efficient and effective safeguards and contribute to increased consistency and transparency in assessments. This paper describes APAT's key capabilities and its relevance to the State Level Concept.

Which "Key Question" does your Abstract address?

TEC2.7

Topics

TEC2

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