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## Strengthening Safeguards Laboratories - A benefit to IAEA

A key topic in international Safeguards is the work in preventing further spread of nuclear weapon technology and nuclear materials. High performance analyses are necessary in order to detect undeclared nuclear activities and require comparability between different producers of analytical results. Within the European Commission Support programme, the JRC Karlsruhe has been demonstrating that the technical competences in safeguards laboratories are of benefit to the IAEA. It will be shown that the direct contact between inspectors and applied nuclear scientists brings in scientific excellence at the working level. Furthermore, frequent and informal contacts between inspectors and RD; staff are essential to enhance scientific/technical capabilities for the IAEA and the safeguards community. Several examples will be described:

\- The participation in Inter- laboratory exercises, provided by the IAEA, allows the safeguards community to reach confidence in the results produced by different stakeholders.

\- Reference material produced by the IAEA, known as the Large Size Dried (LSD) spikes, are verified by JRC Karlsruhe and other laboratories to offer assurance for U and Pu content analyses.

\- The experience gained from operating the Euratom safeguards on-site laboratories OSL/LSS since 1999. This activity provided sustainable information and experience which fed into the On-site laboratory at the Rokkasho Reprocessing Plant in Japan.

\- The COMPUCEA technique which was developed in Karlsruhe for mobile inspections, was, transferred to the IAEA and is now a Class A method used in international safeguards.

Furthermore, it allows non-conventional combinations of measurement techniques used in safeguards and nuclear forensics to obtain more comprehensive safeguards information.

### Which "Key Question" does your Abstract address?

SGI1.4

### Topics

SGI1

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

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