Symposium on International Safeguards: Linking Strategy, Implementation and People - IAEA CN-220



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Verification of Spent Fuel Transfers in Germany – Linking Strategy, Implementation and People

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Following the decision of the German Government to completely phase out nuclear energy by 2022, the Agency is facing an increasing number of spent fuel (SF) transfers from nuclear power plants (NPP) to dry SF storage facilities. Verification of these transfers in the period 2015-2016 would have required about 1000 additional calendar-days in the field by inspectors. To meet the verification requirements with the available resources, the Agency together with the European Commission (EC) designed an innovative approach. The approach is making full use of safeguards cooperation with the EC and Germany's NPP operators to reduce the inspector's efforts, while fully adhering to the Agency's safeguards policy and requirements.

The approach includes verification for partial defect test using digital Cerenkov viewing device (DCVD) of all SF assemblies in a reactor pond(s) before and after a SF loading campaign; during the SF loading campaign all SF in pond(s) is maintained under continuous surveillance, while the containment measures on SF casks, i.e. fibre-optic and electronic seals, and corresponding fibre-optic cables, are applied by the NPP operator in accordance with the agreed procedure.

While the above approach allows for substantial reduction of the Agency inspector presence during the SF cask loading campaign, it can only be implemented when good cooperation exists between the Agency, the facility operator, and, as in the case of Germany, the regional safeguards authority.

Country or International Organization

International Atomic Energy Agency

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Primary author: TSVETKOV, Igor (IAEA)

Co-authors: WISHARD, Bernard (IAEA); MORRIS, Graham (IAEA); ARAUJO, Jose (IAEA); KAHNMEYER, W (European Commission); TRAUTWEIN, W (Federal Ministry for Economic Affairs and Energy, Germany); VUKADIN, Zoran (IAEA)

Presenter: TSVETKOV, Igor (IAEA)

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