ID: Type: **Poster**

T4.1-P01. ”Hot sample” transport exercise: radiation safety aspects and quality of analytical results

Among the lessons learned from the Fukushima accident is that procedures should be developed for handling and shipping of Level 5 samples which exceed exempt quantities for safe transport from a station to a certified laboratory. In parallel, laboratories which have the capability to receive and measure these non-exempt samples should be identified, in case they are needed. An exercise involving the shipment, handling and analysis of a reference “hot” sample was organized to: (1) identify and address radiation safety and high dead time issues when measuring a relatively high-activity sample; and (2) validate the analytical techniques employed, by comparing laboratory results with certified values. Laboratory results were assessed for correct identification of nuclides present in the sample and accuracy of the measurements. The performance statistics used in the evaluation of results were from ISO13528. Five certified IMS laboratories volunteered to participate. The poster describes the conduct of the exercise and provides a summary of observations and results. Precautions implemented by participating laboratories to prevent cross-contamination and ensure radiation protection are also presented.

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Track Classification: 4. Performance Optimization