ID: Type: **Oral**

an Experiment to Simulate a Small Scale Vent

Researchers at Pacific Northwest National Laboratory are preparing an experiment intended to simulate the near-field deposition pattern of radionuclides released in a small-scale vent from an underground nuclear explosion. The experiment is designed to release short-lived radionuclides with sufficient activity to enable ground and airborne survey to measure the plume above background over an area of roughly 1 km2. Background survey and sampling have already been completed at the experiment site. The deposition field will be used to compare and contrast several techniques of gamma radiation survey and environmental sampling followed by gamma assay that could be utilized by an On-Site Inspection (OSI) team under the verification regime of the Comprehensive Nuclear-Test-Ban Treaty. This work will present details of the experiment, and will focus on lessons learned that are relevant to the conduct of an OSI.

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