

of a Modernized Radionuclide Laboratory System to Support the new Generation of International Monitoring Systems

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As the new generation of International Monitoring Systems (IMS) stations radionuclides are being deployed, the radionuclide laboratories are seeing an increase in samples sent for reanalysis. These samples include both radionuclide spikes and environmental backgrounds. Additionally, the sample volumes have increased with the new systems to further improve the minimum detectable concentrations. We have developed an upgraded radionuclide laboratory system that is capable of automatically processing four samples from a new generation IMS stations in series. The system leverages technologies implemented within the new generation of IMS stations to allow for better state of health tracking and automated measurement without the need for liquid nitrogen for the gas processing. In this presentation, we outline the design of the modernized U.S. radionuclide laboratory system and detail the improved capabilities for sample measurement. Additionally, we highlight the potential for increased sample verification with the updated processing and measurement system.

Promotional text

Enhancing the radionuclide laboratories allows for improved coordination with IMS stations for sample verification. To assist in this effort, we have developed an upgraded laboratory system for USL16-NGL based on the new IMS station technology.

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Oral preference format

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