

# The Desktop Radiation Portal Monitor –The Ultimate Training Aid for Developing Maintenance Providers

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Radiation detection systems and measures are key components of both a State's nuclear detection architecture and its nuclear security regime. The sustained operation of these radiation detection systems, to detect nuclear and other radioactive material out of regulatory control, requires trained personnel to operate and properly maintain them. Practical considerations and guidance on implementation, as it relates to the sustained operation of radiation detection systems, have recently been published in the IAEA serial publication NSS-30G, "Sustaining a Nuclear Security Regime", with one of the highlights being the importance of human resource development. The maintenance of a cadre of technicians qualified to maintain radiation detection systems has historically presented challenges to States for various reasons, at both the operational level and the national level (e.g., via a Nuclear Security Support Center). One of the prominent challenges has been access to a functioning detection system for significant time periods to conduct training, and the related limitation on the possible number of trainees at one time. The solution that has been developed to mitigate these training obstacles involves the use of a portable desktop-sized radiation portal monitor, complete with a functional gross counting gamma detector. This solution not only advances the set of technical tools available to train personnel to operate and maintain radiation detection systems, but enables an unprecedented increase in training capacity. This paper will include an overview of this novel maintenance training aid, as well as provide numerous examples of how this tool can be configured to meet the myriad training needs of maintenance staff, including troubleshooting, spare parts testing, etc.

## State

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