

-Up and Calibration of INVAP Stack Air Effluent Monitor

The new Air Effluent Monitor (AEM) that INVAP has developed for nuclear facilities stacks, with the combination of a NaI scintillator and a CdTe semiconductor detector, has been assembled, started-up at factory, and will be installed in a new facility in the next months. Calibration of the monitor has been performed with tailored radioactive sources, to cover the needs of the detection of specific radioisotopes (^{133}Xe , $^{133\text{m}}\text{Xe}$, ^{135}Xe , $^{135\text{m}}\text{Xe}$, ^{131}Xe , ^{85}Kr). Tests of the monitor performance have been carried out in conditions similar to real stack environment. Data corresponding to the calibration of the two detectors and preliminary results of response of detectors to real emission conditions are presented. Full information on all process variables and spectrometric data is available through a local communication interface. This data is also available in a format suitable to be shared with IMS. As a means to enlarge the range of radioxenon isotopes that can be measured by the AEM, approaches to the use of high resolution spectrometry detectors (HPGe) are discussed.

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