ID: Type: **Poster**

T4.1-P02. A Failure Mode and Effect Analysis (FMEA) of the IMS radionuclide station network for the years 2013 and 2014

This poster presents the Failure Mode and Effect Analysis (FMEA) of the IMS radionuclide station network for the years 2013 and 2014. In this time period, 63 certified radionuclide particulate stations and 19 certified noble gas systems were sending data to the IDC. The Performance Reporting Tool of the PTS, the daily state-of-health monitoring of the stations and incident tracking through the IMS Reporting System (IRS), provide the basis for classifying and analyzing different types of failure modes of radionuclide stations. FMEA enables the PTS to develop engineering solutions and systematic strategies for the network to increase data availability and its robustness. The poster provides an overview of FMEA and the failure categories used for the IMS radionuclide network. The particulate and noble gas networks are presented separately as FMEA takes into account the different technologies of the stations. The distribution of failure modes among total station downtime is presented. On the station equipment level an in-depth analysis is provided for failures related to the HPGe (High Purity Germanium) detector systems installed at the radionuclide stations.

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