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Characterisation of contaminated metals using an advanced statistical toolbox

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Radiological characterisation plays an important role in the process to recycle contaminated or potentially contaminated metals. It is a platform for planning, identification of the extent and nature of contamination, assessing potential risk impacts, cost estimation, radiation protection, management of material arising from decommissioning as well as for the release of the materials as well as the disposal of the generated secondary waste as radioactive waste.

Key issues in radiological characterisation are identification of objectives, development of a measurement and sampling strategy (probabilistic, judgmental or a combination thereof), knowledge management, traceability, recording and processing of obtained information.

By applying advanced combination of statistical and geostatistical in the concept better performance can be achieved at a lower cost.

This paper will describe the benefits with the usage of the available methods in the different stages of the characterisation, treatment and clearance processes aiming for reliable results in line with the data quality objectives.