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## Passive Neutron Counting and gamma segment scanning for Waste Measurement

Nuclear material accounting and control will still be an important measure for the nuclear safeguards system. According to the requirements of safeguards and national nuclear material control, measurements of nuclear material contained in the waste is also required to reduce the material unaccounted for (MUF) at nuclear fuel cycle facilities. Determination of the quantity of nuclear material in the waste, which produced at the end of the process of nuclear material production and treatment, is always a challenge to the facility. The accurate measurement of solid waste by  $\alpha/\gamma$  equipment can not only protect the ecological environment, but also obtain great economic benefits. The paper mainly describes the design of the equipment structure, through the design of the  $\alpha$  equipment structure, the detection efficiency is improved. By designing the collimator of the  $\gamma$  equipment, the interlayer crosstalk is reduced to a certain range, thus improve the accuracy of the analysis. The paper also describes the method of analysis, the calibration method, the qualification of the equipment and the prospect of its application.

### Which "Key Question" does your Abstract address?

NEW1.2

### Which alternative "Key Question" does your Abstract address? (if any)

NEW1.5

### Topics

NEW1

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