



Document: ISO/TC 85/SC 5/WG 8/ISO-22946:2020 Summary

## ***Nuclear criticality safety – Solid waste excluding irradiated and non-irradiated nuclear fuel***

This document provides a summary of the following:

**ISO-22946:2020** *Nuclear criticality safety – Solid waste excluding irradiated and non-irradiated nuclear fuel*  
*Sûreté-criticité – Déchets solides à l'exclusion du combustible nucléaire irradié et non irradié*

### **What is this standard?**

This International Standard provides specific requirements and guidance on the nuclear criticality safety (NCS) of solid waste containing fissile nuclides, generated during normal operations. Its aim is to support NCS throughout the solid waste life cycle. The standard also takes into account the potential negative impact of NCS requirements on other important areas e.g. radiological and conventional safety, environmental considerations and cost.

### **What does it cover?**

ISO-22946 is the standard that covers NCS for solid waste. It gives requirements and guidance on a NCS strategy and a NCS safety assessment for solid waste.

- The nuclear criticality safety strategy for solid waste includes:
  - Developing the strategy
  - Consulting with stakeholders
  - Strategizing over the waste life cycle
  - Radioactive waste characterization
  - Review and update
- The nuclear criticality safety assessment for solid waste includes:
  - Deriving criticality safety limits
  - Considerations for the variations in the inventory
  - Radioactive decay
  - Consequences of a criticality accident

### **Why is it useful?**

Solid nuclear waste is of diverse nature and has potentially long timescales over which NCS needs to be demonstrated in its handling and storage. This standard provides guidance that will ensure that the methods to manage the NCS of the solid waste will be consistent between the various potential stakeholders who may take ownership of the solid waste over its lifecycle. It also encourages the provision of NCS to be balanced against other considerations that are relevant to solid waste handling and disposal.

### **Who should use it?**

An individual or body who has responsibility for assessing the NCS of solid waste, or recognised as a stakeholder in the management of such wastes. Also, individuals or bodies with responsibilities of oversight and regulation of facilities and processes that involve the provision of NCS for solid wastes.

### **Where can I find out more?**

The ISO-22946 standard can be found at the ISO website:

<https://www.iso.org/standard/74226.html>