

Decommissioning of small facilities subject to licensing or notification under the radiation protection act in Germany

Gesellschaft für Anlagen- und Reaktorsicherheit gGmbH

P. Imielski, M. Dewald, S. Schneider, T. Braunroth, B. Dittmann

Abstract

In medicine, industry and research, there is a numerically significantly larger group of smaller facilities and installations that are operated based on radiation protection licences or notifications. In an international context, these facilities are referred to as "small facilities". Some of these facilities can be very individual and purpose-oriented, especially if they are research facilities. They sometimes have a radiologically complex operating history. This includes both the nuclide spectrum used and the type, quantity and number of radioactive substances used.

Within the framework of a research project funded by the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), the decommissioning of facilities subject to licensing or notification under the radiation protection act was dealt with.

In this context, a generic orientation aid was developed based on a process diagram, which describes the essential steps in the life cycle of such a facility and which also covers aspects related to waste treatment and disposal. A special focus was placed on decommissioning-related activities and processes. In a follow-up step, this orientation guide was mirrored in a case study. The dismantling of the reactor and the radiology building at the German Cancer Research Centre (DKFZ) in Heidelberg served as a case study.

The results of this research project could, for example, provide guidance and assistance to regulatory authorities or an operator (license holder) for the decommissioning of such "small facilities".