

Decommissioning and Clearance in Austria – Experience report of an expert

On August 1, 2020, the new radiation protection law came into force in Austria, implementing European Council Directive 2013/59/Euratom laying down basic safety standards for protection against the dangers arising from ionising radiation. The previous Radiation Protection Act dates back to 1969, and it was deemed appropriate to reformulate the Act. The radiation protection regulations for artificial and natural radiation sources are now largely harmonised. For this reason, the regulations for handling naturally occurring radioactive materials (NORM) are now contained in the General Radiation Protection Ordinance 2020. The old Natural Radiation Sources Ordinance has thus been repealed. On the subject of radon in workplaces, a new Radon Protection Ordinance was issued on 20 November 2020.

In Austria, only low- and intermediate-level radioactive waste is produced, as it arises in medicine, industry and research. Since no nuclear power plants are in operation, there is neither high-level radioactive waste nor spent fuel elements for disposal.

Most of the radioactive waste arises from decommissioning. Some sites date back to a time when NORM was improperly disposed of. Decommissioned research sites with artificial radioactive waste also still exist. The competent authorities monitor such decommissioning projects.

The Radiation Protection Act 2020 regulates the process of clearance and the General Radiation Protection Ordinance 2020 contains the specific clearance levels. A distinction is made between general clearance, specific clearance and radioactive waste. In the case of general clearance, the substances are released regardless to their destination. In case of specific clearance of solid substances, they must be incinerated in an incineration plant or deposited in landfills, which must meet certain requirements. In the case of unconditional and conditional release, the competent authority checks whether the material meets the clearance criteria. Radioactive waste is deposited in interim storage. There are no special disposal facilities for very low-level radioactive waste or NORM.

The presentation explains the clearance procedure in Austria using current examples. The process can be summarised as follows: Before a decommissioning process is initiated, the competent authority receives a detailed conceptual site model including a radiological characterization, an operation plan and other relevant information. These documents are reviewed to determine whether the conditions for the licence, in particular compliance with clearance levels, are met. The authority issues an authorization or a licence usually containing the decision, the regulatory conditions and a declaration. An authorization refers to a case by case assessment. A licence defines a framework for the performance of specified practices. During and at the end of the decommissioning, the regulators or appointed external experts are present and monitor the progress. Compliance with the authorization or licence is verified and the material is released on the basis of it. The competent authorities confirm the end of the decommissioning process. If this cannot be confirmed, decommissioning continues. Good project planning ensures that radioactive waste is kept to a minimum, which is a basic principle and is controlled by the competent authorities during decommissioning.

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