

The process and progress of implementing the requirements from the new BSS to the Estonian legislation: issues with NORM

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Abstract

The Ministry of the Environment in Estonia has taken the leading role as the regulatory body to carry out the implementation of requirements from the Council Directive 2013/59/EURATOM into the national legislation. To provide successful and timely transition of all the necessary aspects, different interests groups have been involved in this process. Due to the variety of topics covered in the BSS, five working groups (WGs) were formed, dealing with:

- WG1 – General radiation safety principals and regulatory control;
- WG2 – NORM and building materials;
- WG3 – Medical radiation, radiation safety for workers and to the general public;
- WG4 – Radon;
- WG5 – Emergency preparedness and response during and emergency radiation situation.

As the BSS foresees the integration of protection against natural radiation sources to the overall requirements, a nationwide survey was started in Estonia in order to determine the potential NORM industries and materials containing elevated concentrations of naturally occurring radionuclides. The following industries and activities were integrated to the study:

- Oil shale industry (power plants and oil production);
- Water industry (drinking water purification);
- Rare earth metal processing industry;
- Oil shale industry (power plants and oil production);
- Production of cement and building materials;
- Maintenance of large combustion boilers; clinker ovens;
- Underground mines.

Sampling and measurements have been conducted from most of the named industries. This has provided us with a very good initial understanding about the characteristics of these industrial activities as well as the accumulation of NORM in the residues, by-products and end products. One of the essential questions that has emerged is related to the management of NORM residues/wastes. There is an ongoing discussion at the national level on the clearance procedures and alternative disposal options that need to be developed and assessed.

Additional topics to resolve are related to guaranteeing the representativeness of the existing data (the robustness of the collected information); the monitoring approach and reporting requirements of NORM industries and socio-economical aspects related to NORM management.