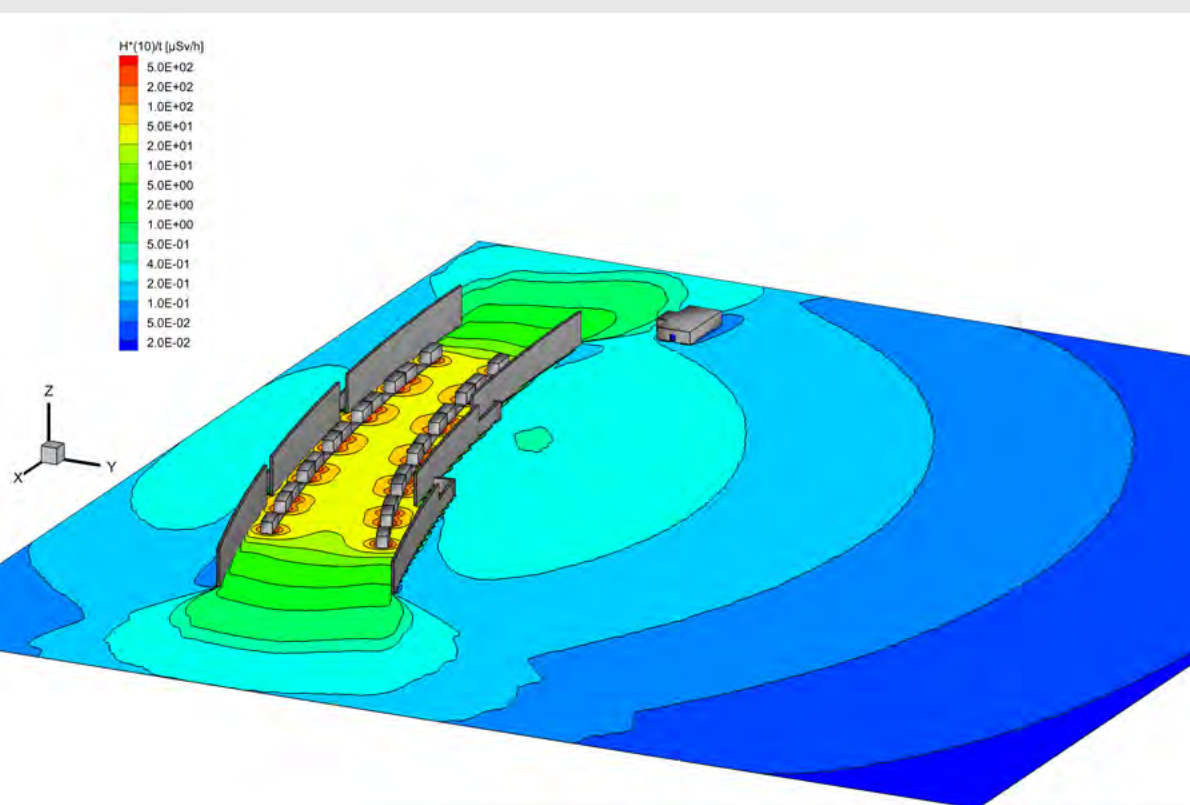


Nuclear Technologies – Licensing & Nuclear Calculations

You can rely on us – secure and reliable

We conduct calculations to provide evidence in nuclear regulatory approval processes, covering all stages from basic analysis to commissioning. Over the decades, we have been a reliable partner in the field of nuclear technology.



The Licensing & Nuclear Calculations (LNC) department within the Nuclear Technologies department is the specialized group for engineering services in the fields of safety and radiation protection.

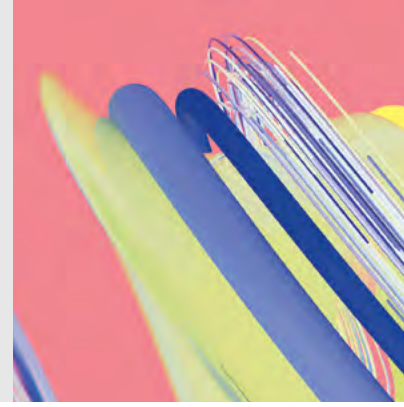
We utilize our expertise and decades of accumulated experience to ensure the safety of nuclear facilities or to act as specialists for complex calculations.

With our modern calculation tools, we solve tasks related to radiation protection and nuclear safety, fluid dynamics, heat transfer, as well as static and dynamic effects on components and structural elements.

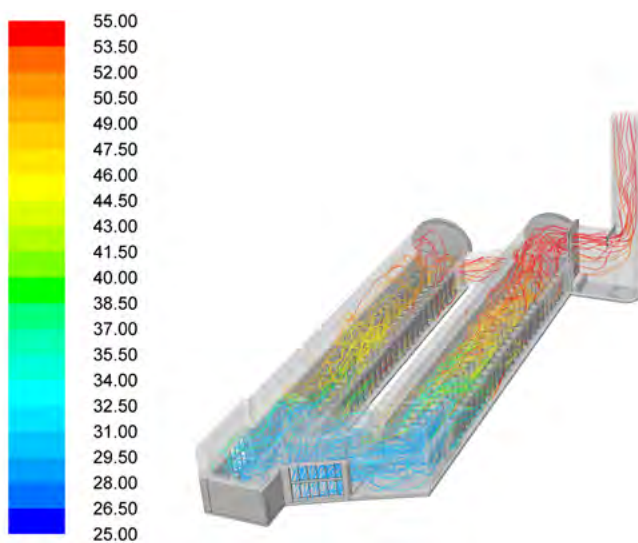
Nuclear safety and incident analysis require a variety of scientific and technical calculations related to the dispersion of radiation and particles. LNC utilizes modern, well established, and in some cases, self-developed and validated calculation tools to provide the necessary evidence during the approval process, which is then subject to expert examination in order to obtain the required approvals.

Integrated into the overall planning of facilities and processes, we have safety and radiation protection firmly under control. We develop surveillance concepts and implement them from the application and approval documents to commissioning, providing turnkey solutions with the appropriate technology and equipment.

Expertise in nuclear calculations, safety and radiation protection, fluid and structural dynamic simulations



With established software systems, we conduct complex scientific and technical calculations in-house. These calculations form the basis for the necessary evidence in the context of nuclear regulatory approval procedures. The positive approval decisions confirm the high quality of our application and approval documents.



For **shielding calculations**, we utilize internationally recognized nuclear radiation protection software such as ATTILA®, SCALE, MCNP, and Microshield®.

For **dispersion calculations**, we utilize our self-developed and validated software products.

Activation calculations assist in determining areas with low activity concentrations and the possibility of release measurements (clearance).

Waste and residue disposal concepts ensure a safe and cost-effective packaging of dismantled and disassembled plant components during decommissioning.

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Our range of services

- We conduct incident analysis, operational disruption analysis, and safety reviews of facilities and systems.
- We accompany the environmental impact assessment process and prepare the required environmental impact study.
- In the approval process, we create the necessary documents and provide technical support to our clients during public participation procedures.
- We provide support for administrative and operational radiation protection during the operation of nuclear facilities, as well as for retrofitting, decommissioning, and dismantling projects.
- We create and review approval documents and operating instructions, especially for radiation protection technology, radiation protection instrumentation, or other safety-related systems.
- We perform calculations in the field of fluid dynamics (CFD) and conduct complex analyses, design components, and optimize processes.
- Based on preliminary activation calculations, we optimize concepts for dismantling, packaging, transportation, and storage of activated materials, laying the groundwork for an efficient decommissioning process.
- We provide support for structural mechanical calculations (FEM), which include crash simulations, drop analyses for containers and packaging, earthquake analyses, as well as aircraft impact analyses on building structures.