



Choose certainty.
Add value.

Radiation protection

Guarantee radioactive materials are handled and disposed of safely.

Your challenges

Safety is the top priority at nuclear power plants (NPP) and other nuclear installations. Operating staff, the general public and the environment must all be protected from the effects of ionising radiation during normal operation and in the event of an incident. To this end, operators and vendors need to comply with all national and international standards as well as specified limit values for radiation protection. It is also important to demonstrate that radioactive materials are safely confined and handled so that the risk of radiation exposure is limited.

What radiation protection services does TÜV SÜD provide?

Our expertise ensures optimum protection from ionising radiation, effective disposal of radioactive waste and safe dismantling of nuclear facilities at the end of their lifecycle. Beyond measuring radioactivity, our experts support you in the handling of radioactive materials and activity flow. We can also assist you with occupational radiation protection

such as shielding calculations, dose measurements and inspections according to the ALARA principle.

Why are these services important for authorities, operators and vendors?

TÜV SÜD's services provide a high-level view of a nuclear installation's safety and reliability. Our nuclear experts help you to prove that all radioactive materials are handled safely. We also support you to ensure that your installation complies with all regulations and standards for the licensing procedure. In addition, we ensure that your materials and electronic devices remain operable when exposed to radiation.

How can we help you?

TÜV SÜD assists you with a variety of radioactivity measurements. We measure, evaluate and calculate ionising radiation and develop engineered solutions for reducing radiation exposure to your personnel and the public. With our many years of experience in producing and assessing documentation for the handling,



storage and transportation of radiological materials, we are ready to support you. Our multidisciplinary and international team of highly specialised experts use state-of-the-art equipment, software and methodologies to cover the full scope of radiation protection.

Our services for radiation protection

- **Radioactivity measurement**

TÜV SÜD's experts provide assistance in radiation and activity monitoring in nuclear facilities, from conceptual design to support during implementation and maintenance. Our experts measure radioactivity on site and in our accredited radiation laboratories. We also provide leakage tests of radioactive sources and testing of accelerators.

- **Radioactive materials, activity flow and radioecology**

In addition to evaluating the activity flow, activity retention and confinement of radioactive materials, TÜV SÜD offers dispersion analysis of radioactive substances in air and water. We also perform radiological incident analysis, comprising identification and evaluation of accidents as well as evaluation of the release and dispersion of radioactive materials. In a radiological emergency, we assist with radiation protection issues. Our experts determine radiation exposure for airborne and liquid discharges as well as naturally occurring radioactive materials (NORM/ TENORM). We also conduct environmental impact assessments (EIA) for nuclear facilities.

- **Occupational radiation protection**

TÜV SÜD's nuclear experts assess your structural, technical and administrative radiation protection measures and organisation. We provide consultancy on external and internal radiation exposure control as well as shielding design and optimisation with recognised computer codes. In addition, our experts

determine the radiation resistance of materials and electronic devices to guarantee they operate when exposed to radiation.

Your business benefits

- **Minimise risk** – by ensuring radioactive materials are handled and disposed of safely.
- **Apply complete solutions** – with our comprehensive service portfolio for radiation protection throughout operation and decommissioning.
- **Choose an expert partner** – that offers international expertise, extensive experience and detailed knowledge of standards and regulations.
- **Benefit from global support** – with highly specialised radiation protection experts in numerous international markets, supporting you with the best possible local knowledge.

Why choose TÜV SÜD?

TÜV SÜD is an independent third-party organisation that provides impartial and objective consulting on NPPs. We offer end-to-end nuclear energy consultancy that begins with licensing and continues through to nuclear waste disposal and decommissioning. Our world-class expertise includes extensive knowledge of national and international standards and regulations. With our international reach, we draw upon global best practices whilst taking into consideration the special needs of your local area.

Choose certainty. Add value.

TÜV SÜD is a premium quality, safety and sustainability solutions provider that specialises in assessment, testing, inspection, auditing, certification, training and knowledge services. Represented in over 800 locations worldwide, we hold accreditations in Europe, the Americas, the Middle East and Asia. By delivering objective solutions to our customers, we add tangible value to businesses, consumers and the environment.

Related services

TÜV SÜD provides the following related services:

- Licensing for nuclear power plants
- Design and construction of nuclear power plants
- Nuclear power plant operation
- Safety assessment of nuclear installations
- Nuclear waste management
- Nuclear decommissioning