

FIT FOR DECONSTRUCTION ENBW KERNKRAFT GMBH

EnBW is one of the largest energy supply companies in Germany and Europe. With around 27,000 employees, the company supplies 5.5 million customers with electricity, gas, water and energy-related products and services.

As part of the energy transition, Germany has decided to phase out nuclear power by 2022. Operation and residual operation as well as decommissioning and dismantling of the five nuclear power plants are in the hands of the subsidiary, EnBW Kernkraft GmbH (EnKK).

Neckarwestheim II was allowed to produce electricity until April 2023. The plant was shut down and is already being dismantled. The other four plants are also being dismantled: Obrigheim since 2008, Neckarwestheim I and Philippsburg 1 since 2017. The decommissioning and dismantling license for Philippsburg 2 was granted in December 2019, meaning that dismantling could also begin there in the course of 2020.

Despite all economic constraints, the protection of personnel from radiation exposure, the protection of the population and the environment, and the safe disposal of radioactive waste remain the primary goals for dismantling.

£nΒW

Industry Energy and utilitiy companies

Employees 27.000

Headquarters Karlsruhe

Challenge

The existing IT solutions for the operation of nuclear power plants are not suitable for decommissioning.

Solution EnKK ReVK

Benefits

- High transparency and overview of the entire operational dismantling process
- > Avoidance of multi-redundant Data maintenance
- > Savings in maintenance and operating costs



CHALLENGE

In order to cope with the task of dismantling nuclear facilities, operators had to prepare for changed or new core processes. The requirements for planning and implementing a decommissioning project are different from those for operation. In this context, the supporting IT systems, which were geared towards the requirements of power operation, had to be adapted or further developed or supplemented accordingly. When designing the system adaptations, the operators' IT must not only keep the purely technical requirements of plant decommissioning in mind. Group requirements with regard to future consolidation of the IT application landscape, cost reduction as well as standardisation and harmonisation of the processes for residue and waste tracking at individual sites must also be taken into account.

SOLUTION

As a solution, the development project "EnKK ReVK" (EnKK residue tracking and control) was started together with RODIAS GmbH. From the beginning, great importance was attached to an iterative, agile project approach with the objective of using partial functionalities productively as early as possible. The gained experiences could then be directly incorporated into the further development process. Thus, the first functionalities of the container management were already being used productively about three months after the start of the project. In the course of the project, a portfolio of functionalities was created under constant reflection of the work results, which completely covers all requirements for residue tracking and control. The system covers all aspects of residual material and waste tracking, both in the performance mode and in plant dismantling. The development of integrated applications for mobile systems (barcodesupported container registration, transport confirmation, warehouse disposition) also significantly improves efficiency when working with the system.

BENEFITS

The central management of operational residue and waste tracking in the "BFS nuklear" creates a high level of transparency across EnKK's entire dismantling project; the maintenance effort compared to application-specific, redundant data management is reduced many times over. The harmonised and reliable database leads to an improvement in acceptance and confidence in the correctness of the data provided by the system. By integrating all aspects of operational residue and waste tracking into "BFS nuklear", specific applications and the infrastructure resources used for them can be replaced and corresponding maintenance and operating costs saved.

If residual material or waste quotas and movements are managed redundantly in several systems, a higher-level evaluation is only possible to a limited extent and with additional effort for data synchronisation. Often, the research results are only available locally and are not directly available to the general public. Central operational residue and waste tracking provides a quality-assured database for site-specific evaluations.

RODIAS is a medium-sized IT service company specialising in systems for the maintenance of complex technical facilities and buildings. With an agile approach and innovative approaches, we realise Industry 4.0 solutions for our customers based on current software technologies.

As part of ROBUR, RODIAS offers even more: Almost 3,000 colleagues work worldwide in the industry segments wind, water, energy, industrials and process industry. As a competent partner to our customers, we create integrated solutions from planning and realisation to installation, operation, maintenance to relocation and dismantling.