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Abstract till NKS-seminarie ang radiologisk kartläggning av R2

Title: Radiological survey for the R2 reactor decommissioning project

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Abstract:

The R2/R2-0 reactors were finally shut down on June 16, 2005. In the first stage of the decommissioning, a radiological survey of the reactor complex with surrounding buildings is included.

Radiological survey models are developed for the buildings and its systems where the sampling and measuring techniques are adjusted to the different buildings and/or the system. The models shall secure adequate extent and quality of the survey work.

The purpose of the radiological survey of the reactor complex with surrounding buildings is to estimate the radiological status of both buildings and rooms, as well as systems and equipment.

The survey includes determination of the contamination level, dose rate measurements, as well as nuclide specific measurements of activity in samples from material, water and smear tests.

Detailed working instructions and check lists have been developed to a degree required to secure the radiological survey.

The working report for the unabridged radiological survey includes the R2 and R2-0 reactors with included systems, the reactor building, the service building, the primary pumping station, the outer supply tanks, the checking pool, the secondary piping system, the active tank space, the chimney, the isotope centrale, the emergency backup power supply and part of the laboratory building.

All work within the radiological survey of the R2 complex follows relevant parts of the Studsvik management system SMAK.

Experience both at Studsvik as well as national and international has been considered for the radiological survey and for the upcoming decommissioning. One lessons learned from the ACL-project at Studsvik was that the radiological survey performed early in the project was not detailed enough to optimise the actual decommissioning.

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The radiological survey is the base for the

- Planning of radiation protection measures,
- Development of preliminary dose budgets for the starting of the dismantling,
- Waste categorization, and
- Cost estimates.