

Studsvik

From Classifications to Clearance – Methods and lessons learned

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Studsvik worldwide



Offices in:

- Atlanta
- Wilmington
- Boston
- Idaho Falls



Offices and Agents:

- Japan
- China
- United Arab Emirates

Joint ventures

KOBELCO STUDSVIK Ltd
(Japan)



Offices in:

- Sweden
- Germany
- Switzerland
- France
- UK

Facilities in:

Sweden

Turning complicated conditions into pragmatic solutions



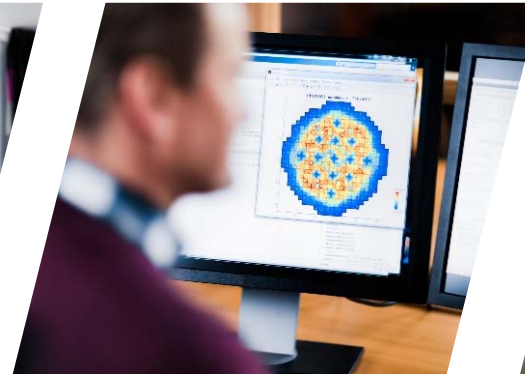
Fuel and Materials Technology

Global experience in nuclear fuel, material, and water chemistry analyses



Consultancy Services

Safe and efficient solutions for Radioactive Hazards on a global market



Scandpower

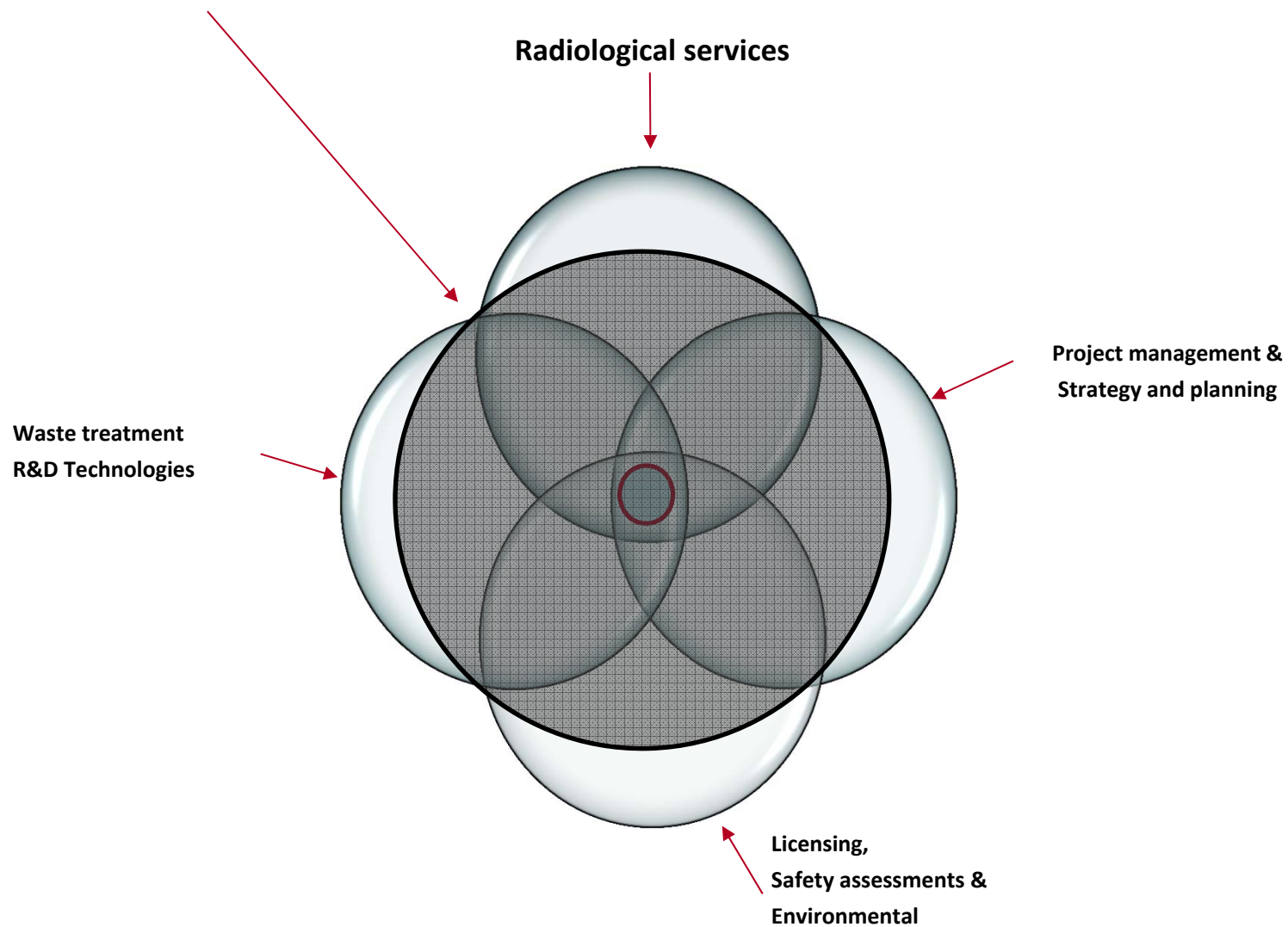
Innovative software and services to design and analyze all commercial fuel and reactors



Germany

Service provider within radiation protection and decommissioning

Studsvik Decommissioning



Radiological Services - Risk mitigation from the start

“Radiological characterisation is undoubtedly one of the key factors for any successful decommissioning project.”

Radioactive Waste Management
NEA/RWM/WPDD(2013)2
September 2013
www.oecd-nea.org

Radiological Characterisation for Decommissioning of Nuclear Installations

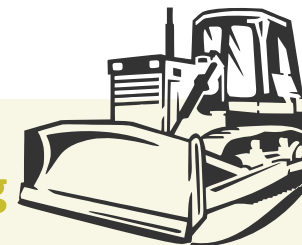
Final Report of the Task Group
on Radiological Characterisation
and Decommissioning (RCD) of the
Working Party on Decommissioning
and Dismantling (WPDD)



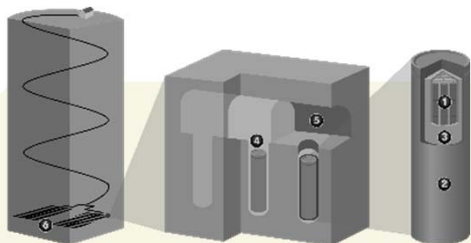
Operation and modernization

Forsmark BWR
Oskarshamn BWR
Barsebäck BWR
Ringhals BWR PWR
Olkiluoto BWR
UK ABWR

Decommissioning



R2 Research reactor
Ågesta Heavy Water reactor
MAX-Lab
Ranstad uranium mine
Karolinska Hospital
Oskarshamn BWR
Sigyn spent fuel transport ship



Waste management

Clab central interim spent fuel storage
Clink extended interim spent fuel storage
Ågesta control rod transport cask
Sigrid spent fuel transport ship

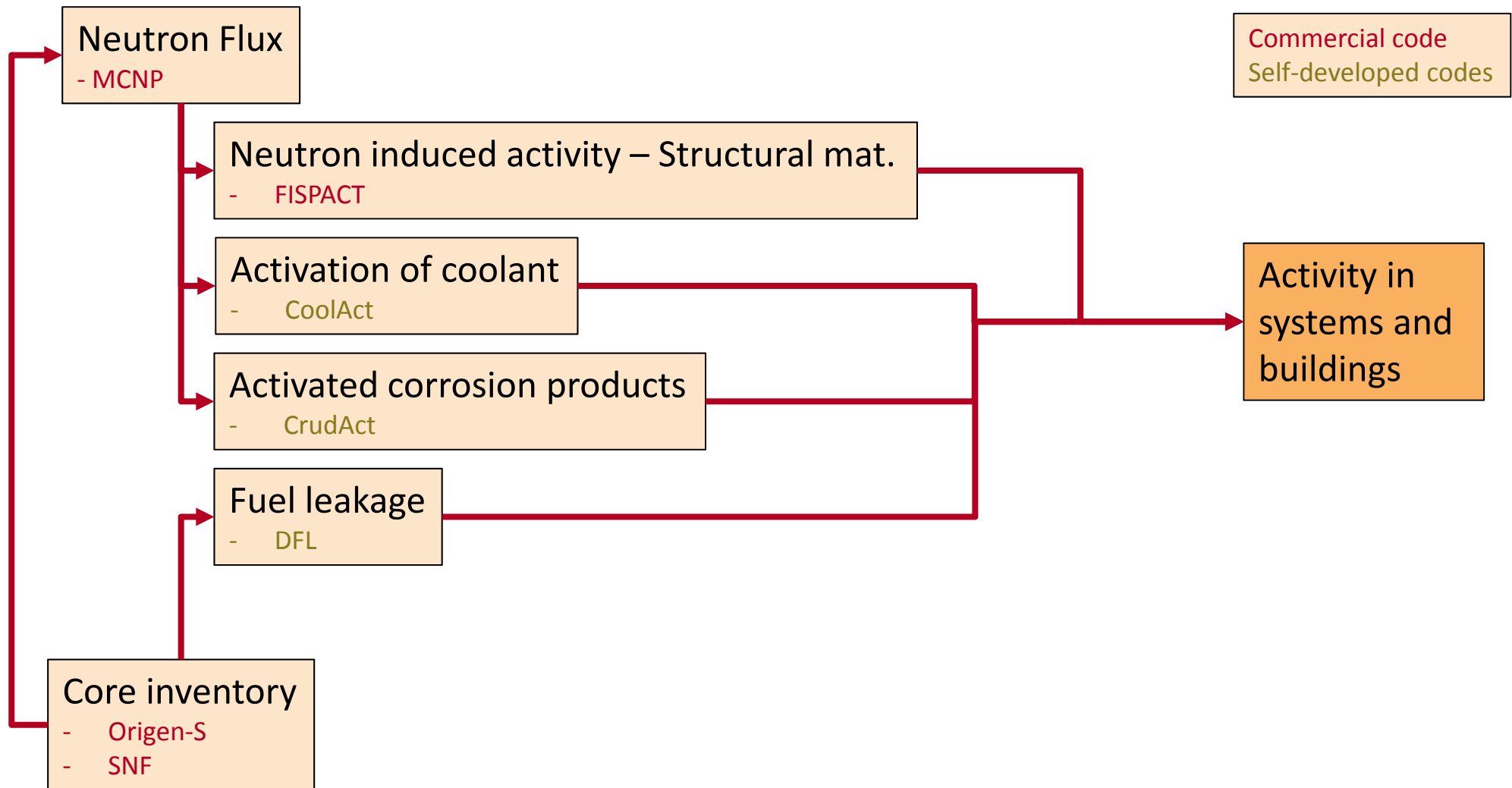


Research

ITER
Uppsala University Accelerator
European Spallation Source
Hot Cell Laboratory Studsvik
Hot Cell Laboratory Enresa

How do we estimate radioactive inventories?

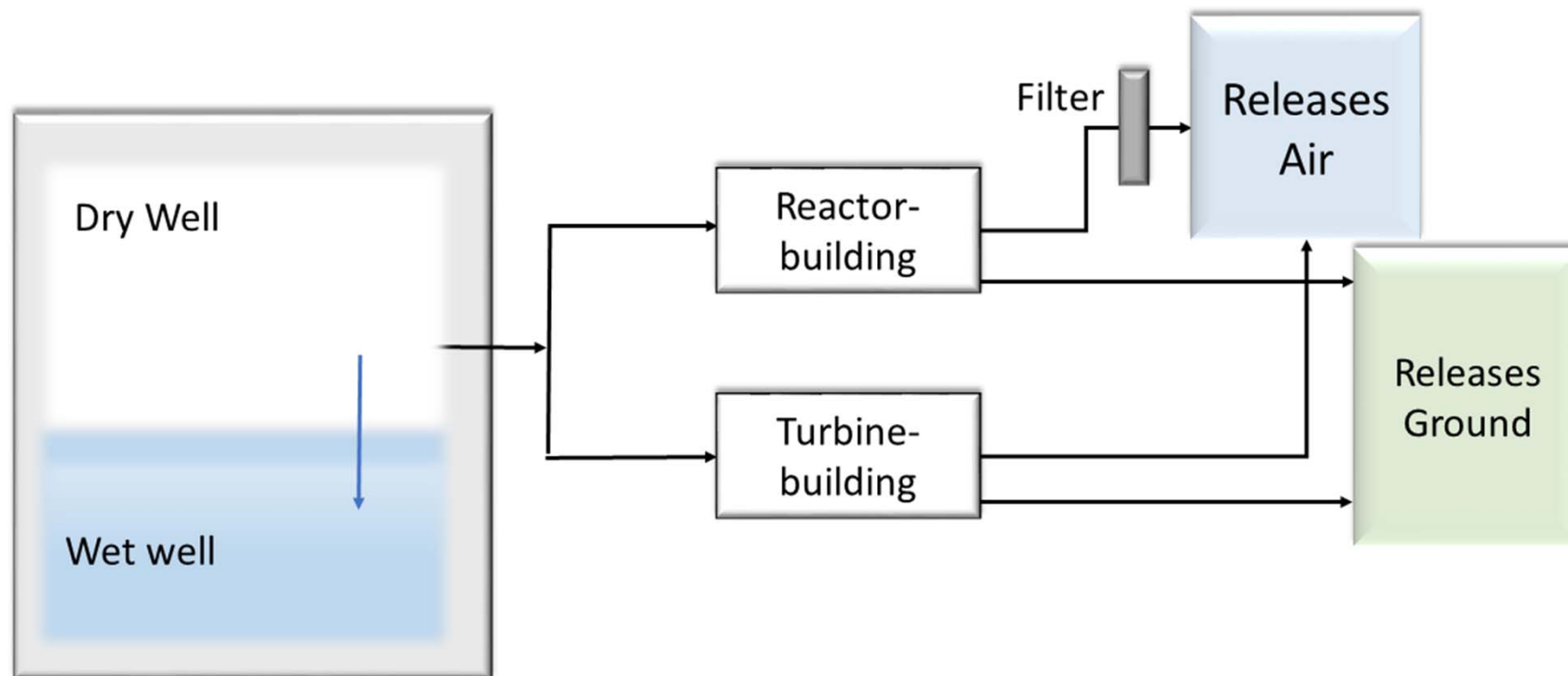
Radiological Services - Modelling approach to activity inventories



What can we learn based on the estimated radioactive inventory?

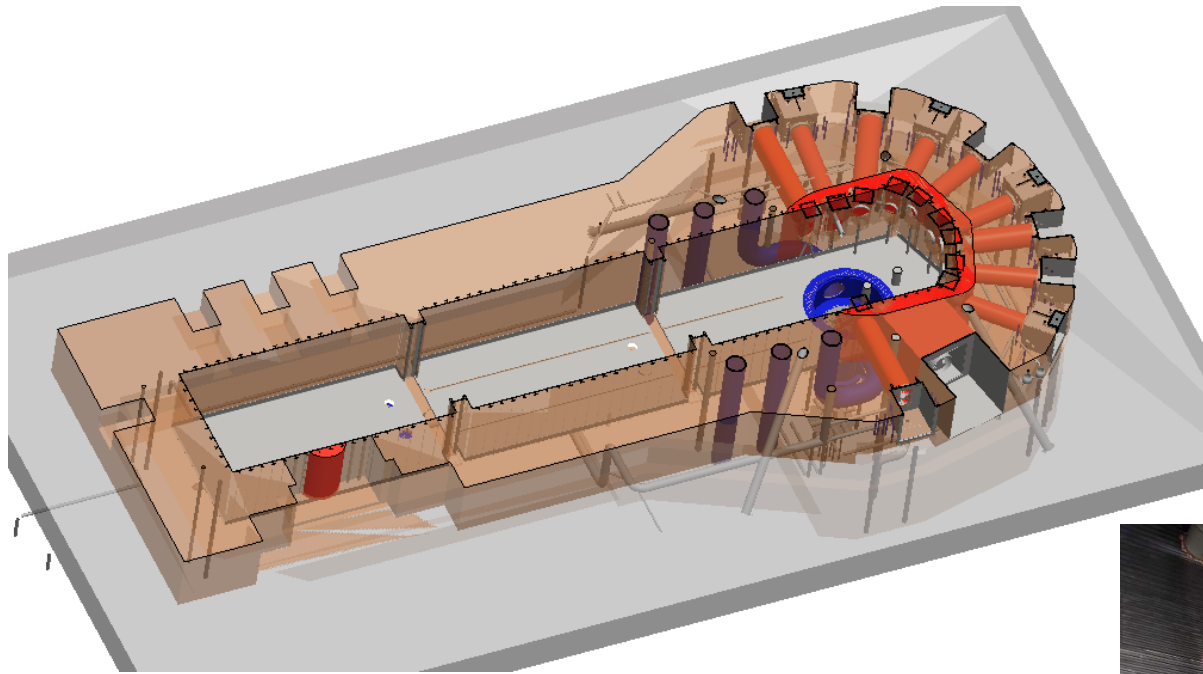
Radiological Services -

Estimation of radioactive releases



How do we optimize the process of free release and waste disposal of building structures?

Radiological Services - Planning and optimization when decommissioning



Radiological Services -

Free release

Radiological characterisation

Adaptive approach to clearance



Few measurements



Preferred supplier for certifying and education of staff for clearance of materials/buildings and soil according to regulations

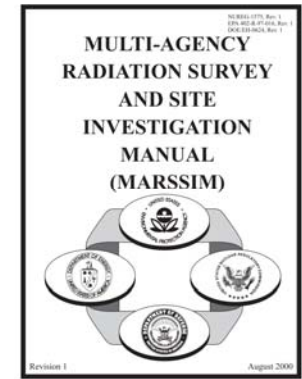
Studsviks free release methodology

- In house developed method for demonstrating compliance to regulations for free release of large objects, buildings and sites.
- Ranstad
- M/s Sigyn
- MAX-lab
- Verified and accepted by SSM (The Swedish Radiation Safety Authority)
- The method is already implemented in the control program of the three Oskarshamns NPP and in the free release of the Karolinska hospital in Sweden.



Based on and compliant with MARSSIM

- Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)
- Developed collaboratively over a four-year period by members representing the four federal agencies that have primary responsibility for controlling radioactive materials in the USA.
- Provides detailed guidance on how to demonstrate that a site is in compliance with a radiation dose- or risk-based regulation. Focusing on the demonstration of compliance during the final status survey following scoping, characterization and any necessary remedial actions.



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