

Actinet from a Regulatory Point of View

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General

- Actinet is a good example for European cooperation in a specific field of scientific research
- Emphasis on education and training is a special advantage regarding the next generation of specialists

Safety of Final Disposal (1)

- In Germany: Ordinance regarding safety of final disposal under discussion
- Possible host rocks: salt domes, claystone
 - main emphasis on geological barrier
 - geotechnical barriers (shaft seal, drift seals) have to “heal” the violations of the geological barrier
- Important role of “isolating rock zone”

Safety of Final Disposal (2)

- classes of scenarios of different probability:
 - probable scenario(s)
 - less probable scenarios
 - scenarios which can be excluded

Safety of Final Disposal (3)

- for the probable scenario has to be shown:
isolation of hazardous material in the “isolating rock zone”
- for less probable scenarios has to be shown:
leakage of hazardous material does not result in violation of limits for radiological and chemotoxical exposure

Need of Knowledge on the Behaviour of Actinides

- less probable scenarios: transport behaviour from waste package into the biosphere
- probable scenario: transport behaviour regarding diffusion controlled processes (claystone as host rock)
- possible transport of actinides in geotechnical barriers

Other fields for Application of Knowledge on the Behaviour of Actinides

- remediation of final disposal sites with problems (e.g. Asse mine, Morsleben repository)
- remediation of nuclear facilities with release of actinides to soil resp. groundwater

Open questions in the interaction (1)

Policy makers have to decide on final disposal and money

- “Is final disposal too dangerous, because we don’t know the exact behaviour of actinides?”

→ clearer answers are necessary, how the knowledge and the lack of knowledge influences the prediction of safety for final disposal

- “Why shall we finance future research on actinides”

→ Clearer answers are necessary on the role and the advantages of future research in the field of actinides

Open questions in the interaction (2)

Regulators have to decide on the safety case of a specific final disposal project

- Answers are necessary, whether a specific scenario is influenced by actinide behaviour and in which way
- Uncertainties or lack of detailed knowledge: what does that mean for the band of possible answers ?
- Does the answer mean a “go” or a “no go” ?

Conclusions

- For the realization of final disposal: actinide research is necessary and remains necessary
- But there is a need for clearer communication to both policy makers and regulators – especially regarding the answers and the type of answers they need

Thank you for your attention