NDA RWMD Involvement in RATE

To deliver a geological disposal facility and provide radioactive waste management solutions

Dr Jon Martin
NDA RWMD
Our science base

- **General science**
- **Radwaste R&D**
- **Joint initiatives e.g. NDA/RCUK, EC**
- **RWMD R&D programme**

- **Build on**
- **Observe**
- **Influence**
- **Commission**
Evolution of Geo-disposal R&D

Past

Timeline

Future

Concept Viability Challenging Issues

Key Issues

Improvement to Underpinning

Optimisation & Validation

Current emphasis

Past

None remain

Future

C-14 gas pathway
Uranium
Groundwater movement (Site-specific)

Bridges to International R&D (SF/HLW)
Criticality

Optimisation & Validation

Largely site specific
Appendix A

Wasteform & Container Evolution

- Wastes for HLW / Spent Fuel
  - HLW/Spent Fuel containers for HLW / Spent Fuel
  - HLW/Spent Fuel container for Spent Fuel
  - HLW/Spent Fuel containers for Spent Fuel

- Cement Based Wastes
  - Cement Based Wasteform

- Polymer Based Wastes
  - Polymer Based Wasteform

- Vitrified HLW
  - Vitrified HLW wasteform

- Vitrified Spent Fuel
  - Vitrified Spent Fuel wasteform

- Other Wasteforms
  - Other Wasteform

Appendix B

Wasteform Evolution

- Wastes for HLW / Spent Fuel
  - HLW/Spent Fuel containers for HLW / Spent Fuel
  - HLW/Spent Fuel container for Spent Fuel
  - HLW/Spent Fuel containers for Spent Fuel

- Cement Based Wastes
  - Cement Based Wasteform

- Polymer Based Wastes
  - Polymer Based Wasteform

- Vitrified HLW
  - Vitrified HLW wasteform

- Vitrified Spent Fuel
  - Vitrified Spent Fuel wasteform

- Other Wasteforms
  - Other Wasteform

Appendix C

Top Level Report

- RWMD Report
  - Geological Disposal
  - Science & Technology Plan

- Document preparation and approval
  - Document information
  - Revision

- Appendix A
  - Wasteform & Container Evolution

- Appendix B
  - Wasteform Evolution

- Appendix C
  - Top Level Report
RWMD Involvement

- Member of Programme Executive Board

- Nominated leads to support each project
  - HydroFrame – Rob Whittleston / Simon Norris
  - Lo-RISE – Rebecca Beard
  - TREE – Ray Kowe

- Coaching / guidance

- Facilitation of opportunities

- Links to EPSRC Geowaste cohort
Thank you

RWMD Bibliography:
http://www.nda.gov.uk

Any questions:
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