

Role of Storage in Radioactive Waste Management

Dr James McKinney

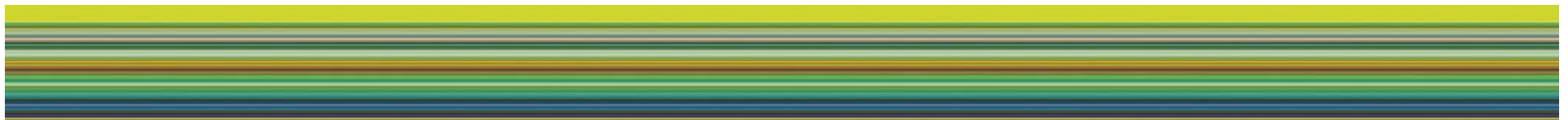
Nuclear Decommissioning Authority, UK



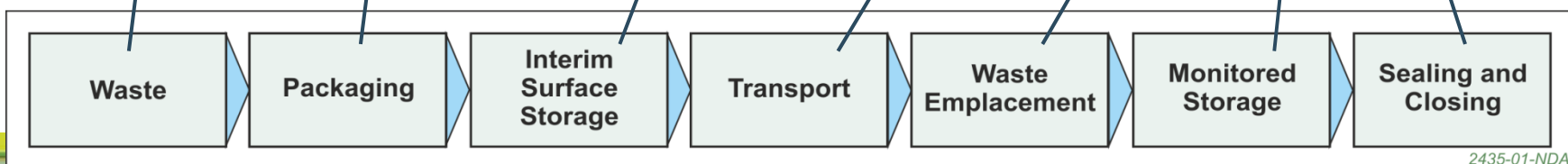
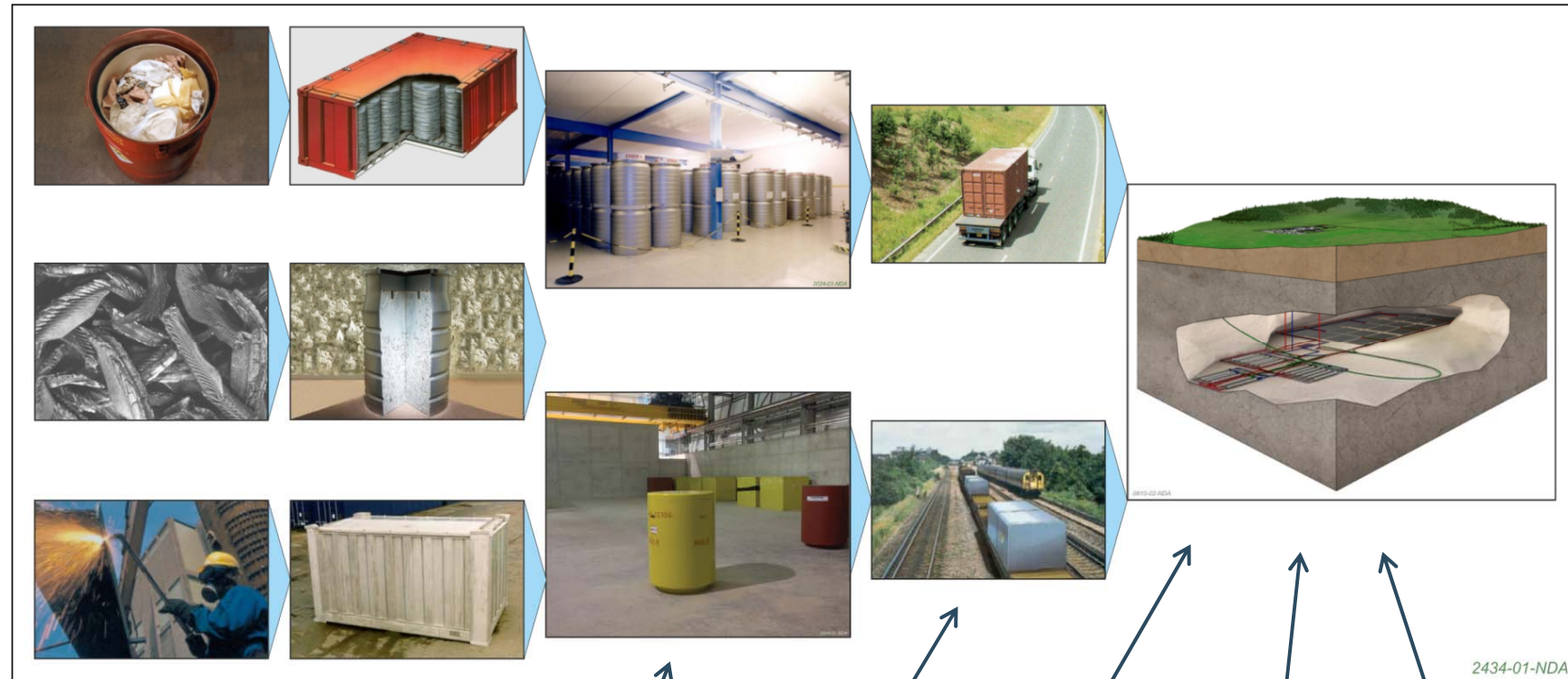
International Atomic Energy Agency Scientific Forum
**RADIOACTIVE WASTE:
MEETING THE CHALLENGE**
Science and Technology for
Safe and Sustainable Solutions
23–24 September 2014, Vienna, Austria

Why Store Waste?

- Protect people and the environment
- Maintain waste in a safe condition pending disposal or if necessary, further treatment
- Allow decay of relatively short half life radionuclides
- Step on a planned disposal scheme

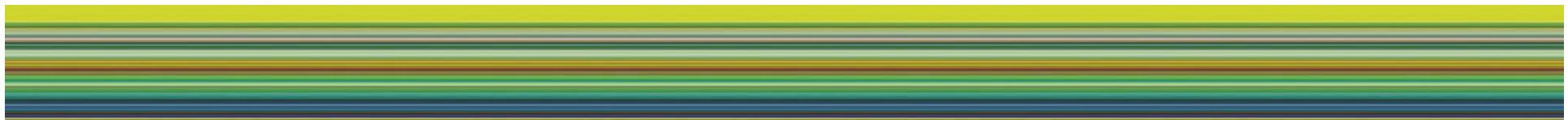
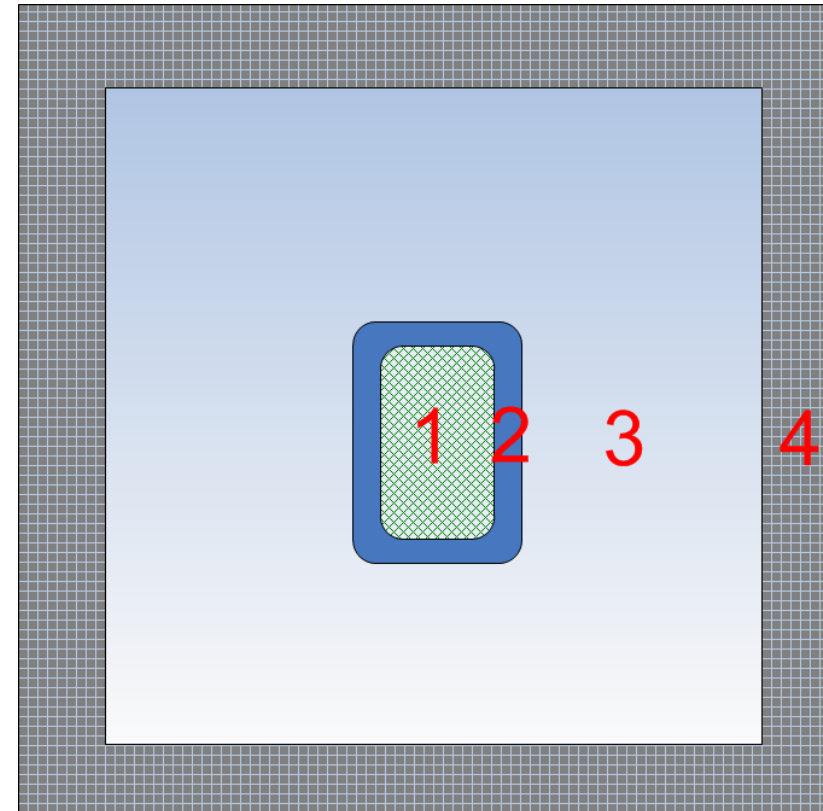


Stages in Radioactive Waste Management

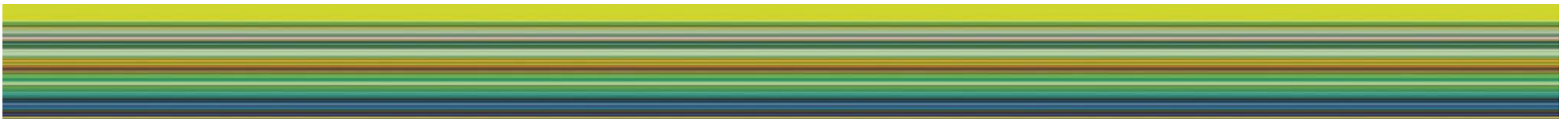


Store Requirements

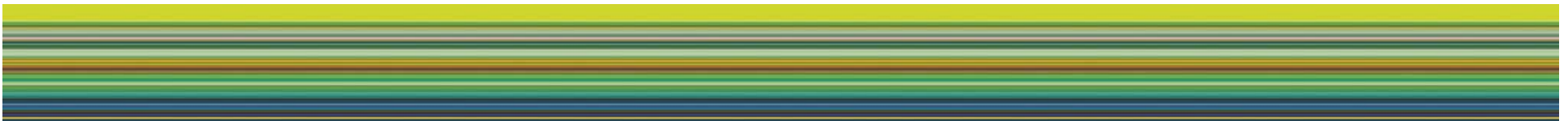
- Isolation of waste – prevent inadvertent contact
- Shielding to meet dose constraint
- Security – control access
- Controlled environment to provide benign conditions
- Monitoring arrangements
- Provide adequate export facilities
- Siting/store location



Interim Surface Storage



Interim Surface Storage



Store Operations Forum

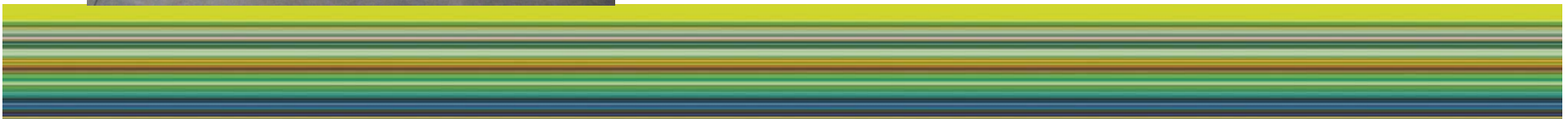


Dounreay – 2014



Bradwell - 2013

- NDA initiated Store Operations Forum – all UK waste producers are members
- Group meets annually to exchange information and good practice
- Supplemented by telephone conferences through the year
- Dedicated Knowledge Hub area
- Bilateral meetings, audit support and site visits encouraged



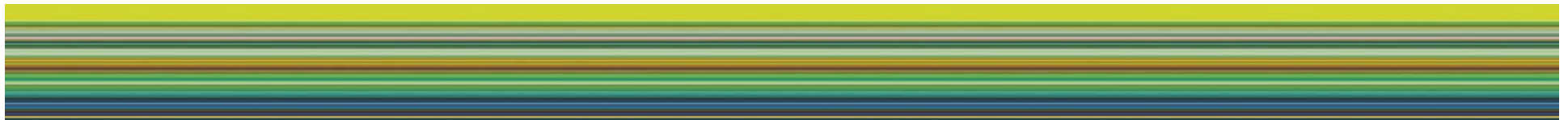
Providing Guidance to Store Operators



- Industry Guidance document published in November 2012
- Designed to meet Radioactive Waste Management Ltd (RWM) requirements
- Reviewed by IAEA with recommendations for development
- Revisions and updates driven by user store operators experience and issues

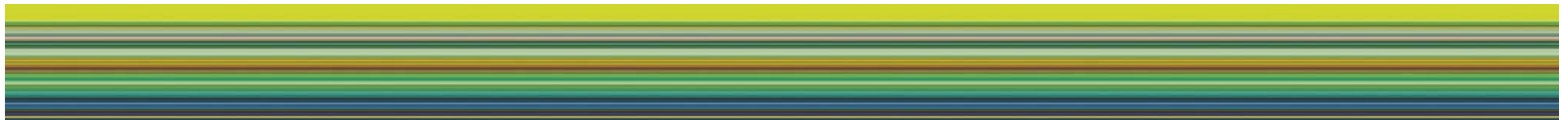
Key Issues for SOF

- Store environment – preserve packages / manage evolution
- Baselining of package condition – entry to storage
- Monitoring – evolution of condition with time
- Records – comprehensive and complete
- Asset Management – long term maintenance and life extension of store



Summary

- Design store to provide a benign environment
- Plan for lifetime extension / asset management
- Design in package monitoring facilities
- Ensure package condition is defined on entry to store
- Ensure package records are complete on entry to store



Thank you