



# **The Environment Agency and regulation of legacy facilities at Sellafield**

**Waste Management Symposium 2017**

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March 2017

# The Environment Agency – Nuclear Regulation

We regulate the Nuclear Industry in England under the **Environmental Permitting Regulations (EPR2010)** in respect of:

- Solid waste disposals
- Liquid wastes discharged to sea, rivers, sewer, groundwater
- Gaseous wastes discharged to atmosphere
- Non-radiological wastes, discharges and resource/energy usage



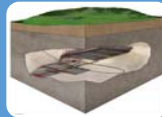
Operational Sites Regulation



Decommissioning and clean up



Nuclear New Build



Higher Activity Waste



Incident Management



Environmental Monitoring

# The Environmental Permitting Regulations

Our approach derives from international and national law, standards and guidance including:


## Basic Safety Standards Directive

- *exposures to be kept As Low As Reasonably Achievable (**ALARA**), economic and social factors being taken into account; and*
- *doses shall not exceed **specified dose limits**.*

## Oslo and Paris Convention (OSPAR), the UK Strategy for Radioactive Discharges and Government Statutory Guidance to EA

*Operators must use Best Available Techniques (BAT) in order to:*

- **prevent** unnecessary creation of wastes or discharges;
- **minimise** waste generation;
- **minimise** the radiological impact of discharges on people and the environment.



**Notice of variation with introductory note**  
The Environmental Permitting (England & Wales) Regulations 2010

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Sellafield Limited  
Sellafield and Windscale Sites  
Seascale, Cumbria  
CA20 1PG

Variation notice number  
EPRKP3690SXV005

Permit number  
KP3690SX

## Sellafield site context

Hugely complex and congested site

100+ year mission to end state

Legacy ponds & silos - over-riding consideration is reduction of risk in intolerable facilities

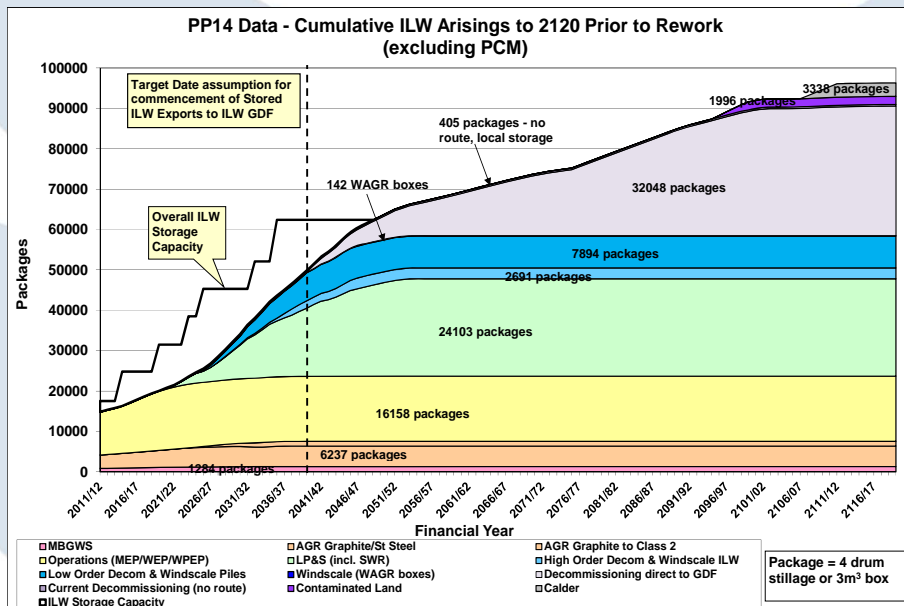
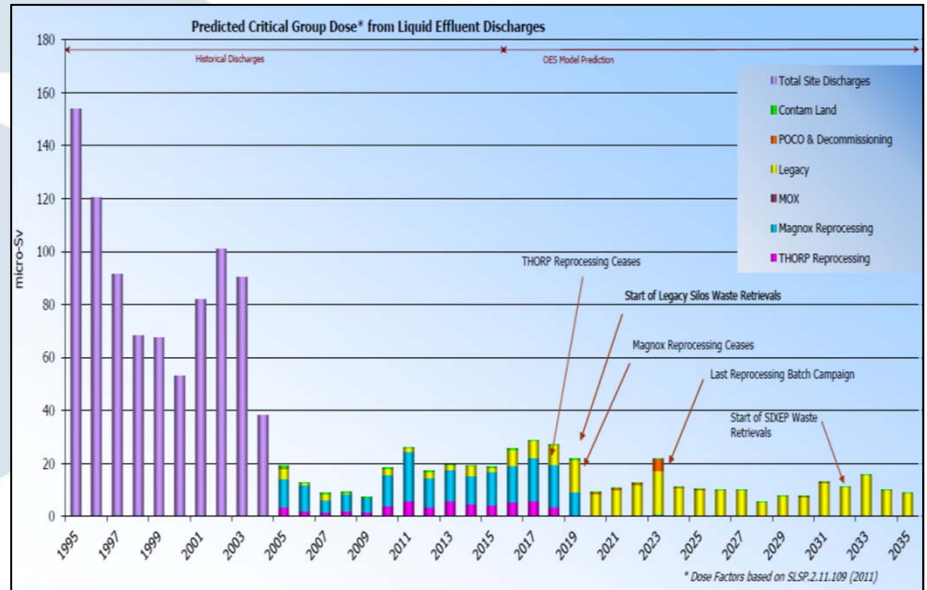
Need to optimise discharge and waste management for the full lifecycle (BAT)

Need to minimise the risk of creating further legacy



# Sellafield wastes and effluents

One of the most significant source of nuclear industry discharges into the environment in Europe



Very significant forecast waste arisings to site end-state:

- 4,000m³ HLW
- 110,000m³ ILW
- 12,000m³ PCM
- 650,000m³ LLW
- 2,800,000m³ VLLW/out-of-scope



## Cooperative working and the 'G6'



Sellafield Ltd



Nuclear  
Decommissioning  
Authority



Office for  
Nuclear Regulation



Environment  
Agency



UK Government  
Investments



Department for  
Business, Energy  
& Industrial Strategy

- Shared mission
- Effective communication
- Manage blockers to progress
- Pragmatic, fit-for-purpose solutions
- Clear schedule for regulatory engagement
- Maintain regulatory independence
- Maintain stakeholder confidence



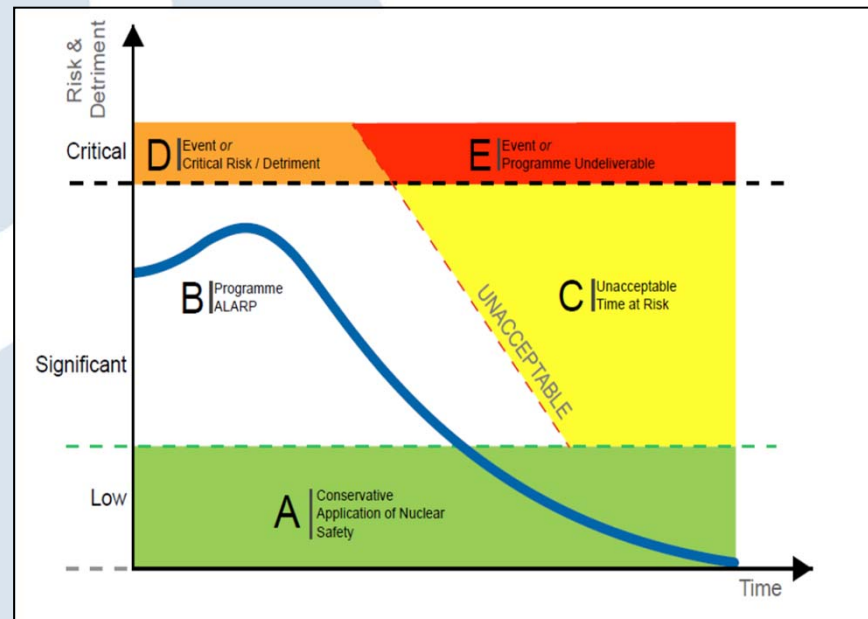
Environment  
Agency

## EA approach to facilitate hazard & risk reduction

- rationalisation of permit limits, sampling & monitoring requirements
- flexibility in permit specifications, e.g. generic registration for certain release points to air; reporting requirements
- pragmatic BAT expectations & fit-for-purpose solutions, e.g. solid waste lay-down and interim storage; move to a risk-based approach to waste sentencing for disposal
- confidence in SL adopting a lead & learn approach
- greater reliance on post-project implementation assurance, e.g. legacy ponds sludge retrievals
- support for interim raw ILW storage options to facilitate early retrievals

# Challenges

- Risk appetite for retrievals
- Balance of near-term risk reduction versus lifecycle environmental detriment
- Continue to work in the context of uncertainties – what are the consequences of variance?
- Planning in the context of a yet-to-be defined end-game (waste repository; site end state)







Thank you for your time

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