Regulatory skills and application to regulation at Sellafield.
IAEA NEA WANO workshop on Human Capital

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Who we Are

• Established as an independent regulator 2013. Formerly a division of the UK Health and Safety Executive and known as the Nuclear Installations Inspectorate (NII).

• Our mission is ‘To provide efficient and effective regulation of the nuclear industry, holding it to account on behalf of the public’.

We regulate:

• Nuclear safety and security at 37 Great Britain (GB) nuclear licensed sites.

• Conventional health and safety on GB nuclear licensed sites.

• Nuclear transport in GB and;

• Ensures that UK safeguards are met.
A regulatory perspective

• Consider skills challenge from 2 perspectives:
  • Regulating resource challenged industry
  • Attracting and developing skilled regulators

• Historically recruited experienced specialists
  • Minimal technical training needed… But
  • Average age higher than industry norm so retirement impact amplified

• UK Nuclear programmes meant ONR needed additional regulators - A new approach required:
  • Recruitment strategy
  • Capability / competence strategy
  • In some cases a new regulatory strategy – e.g. case study
Recruitment Strategy

• Geographic
  • New offices in Cheltenham and London

• Demographic
  • Sponsor UK ‘Nuclear Graduates Scheme’
  • Recruitment of Band 4 associates
  • Equivalence process for new graduates or non-nuclear specialists
  • New Degree-Level apprenticeship scheme

• Results
  • Successfully recruited 215 specialists since 2014
    • Sponsored 35 nuclear graduates
    • Recruited 22 through equivalence
  • Cheltenham and London attracted over 140 staff
  • Better demographic profile
ONR Academy

• Real and virtual training environment to develop all staff
  • VC Linked training room
  • ‘Academy online’

• Regulatory Competence model developed (IAEA guidance)
  • Supporting syllabus mapped to competencies

• Include more core and technical competencies
  • links with universities and Nuclear Institute

• E-learning and ‘bite size’ courses

• Revised development process for graduates and early career inspectors
  • Includes on-the-job training through coaching guides & tutorials
• Windscale construction started in 1947.
• ~ 70 years of development supporting UK nuclear policy.
Sellafield Legacy Ponds

Pile Fuel Storage Pond (PFSP)

First Generation Magnox Storage Pond (FGMSP)
New regulatory strategy

- Implementation of G6 group - initially led by ONR.
  - Inclusion of key UK stakeholders - ONR, EA, BEIS, UKGI, NDA, SL
  - Common goals, removal of blockers
  - Strategic Forum supported by ‘Engine Room’ and working groups

- Introduced a new Sellafield regulatory strategy in 2014.
  - Separate compliance and enforcement from project delivery
  - Flexible permissioning
  - Enabling Regulation

Enabling Regulation

A constructive approach with dutyholders and other relevant stakeholders to enable delivery against clear and prioritised safety & security outcomes

- Building on good regulatory practices and successes
- Focus on outcomes not process
- Common purpose – work the problem
- Fit for purpose/adequate solutions
- Understanding of strategic factors in decision making
- Behaviours – build trust
- Willingness to address blockers, distractions and bureaucracy
- Recognition that ‘not doing’ often has its own risk burden
Permissioning rate remains busy

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• **PFSP Progress**
  • Bulk fuel exported ~90% nuclear hazard removed
  • 20M$^3$ Sludge retrieved and encapsulated
  • 24 ILW skips exported to onsite store & 75 skips recycled
  • Interim-state preparations underway

• **FGMSP Progress so far**
  • 114Te of solid fuel exported
  • 85M$^3$ sludge exported (including D-Bay sludge
  • Construction of Interim Store for over 500 ILW and fuel skips
  • First empty skips exported to onsite stores
Conclusions

• The challenge of skills and knowledge affects regulators in two ways

• As well as specialists, developing our future leaders will be a key challenge

• Future human resource priorities include:
  • Provide graduates & early career specialists the training and experience
  • To continue developing new skills and knowledge – e.g. emerging technologies & safeguards
  • Implement ‘Well Informed Regulatory Decisions’ (WIReD) to improve processes and knowledge management
  • To develop the future regulatory leaders