Regulatory Oversight of Safety Culture During Decommissioning of Nuclear Facilities

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TM Integration of Safety Culture into Regulatory Practices and the Regulatory Decision Making Processes
Introduction

Experience
• 27 years at Sellafield and other International Sites
• 7 years experience with Magnox Ltd with 10 Reactor sites in various stages of life.
While decommissioning is going on portions of the plant are still involved in commercial fuel processing operations. In 2011 and 2012 Sellafield vitrified over 2,300 tons equivalent of uranium and removed the outer casing of over 600 tons of spent fuel in preparation for reprocessing.
Is Decommissioning Different?

Decommissioning is Different from Generation

- Dynamic Changing Work Conditions
- Dynamic Changing Organisation
- Dynamic Changing Workforce

- AND Dynamically changing risk profiles.

Impact on Nuclear Regulation?
How is Nuclear Safety Culture Maintained?
Regulatory Challenges

Nuclear and Industrial Regulation Interfaces

Nuclear and Security Interfaces

Nuclear and Environmental Interfaces
People Challenges

Management and Workforce Challenges

• Changing from Power Generators to Decommissioners
• Use of Contractors
• Cultural Fit?
• Professional Working relationship
• Training and Skills
• Risk Perception
Decommissioning Management Processes

Known Knowns
Known Unknowns
Unknowns Unknowns
Unknowns Unknowns

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Decommissioning Management Processes

- Planning and Project or programme design
- Procurement
- Set to work process
- Internal Independent Oversight
- Safety Assessment
Plant Considerations

• Design
• Build as well as Decommission/Demolish
• Split Site Issues
• Off the shelf + novel design
• Knowledge management
• Budget constraints –
  • the stop/start situation
  • Suspended projects
Culture Questions

Regulator Body

• How do you maintain skilled people in decommissioning regulation?
• How do you deal with the Priorities within the country’s nuclear programme?
• How do you deal with the changing risk profiles and risk perception?
• How are regulators going to monitor Safety Culture and Leadership for Safety inside the organisations being regulated?
• How do you maintain a working relationship with ever-changing organisations?
Culture Questions - How will you recognise?

Consider these potential Cultural conditions:

- Open communication?
  - Do as I say not as I do

- They are only after maximum money
  - They don’t want hear about problems

- Questioning attitude?
  - Not generating so no nuclear risk

- Conservative decision making?
  - Respect? Trust?

- What the plant don’t know wont hurt them
  - THEM and US
Edgar Schein’s Levels of Safety Culture

Safety Outcomes and Indicators

Observed Behaviours and Management Systems Interfaces.

Guiding Principles, Influences on Behaviour, Beliefs and goals

Underpinning and Cultural Beliefs and Expectations of Behaviour
Two views of culture

Culture as one variable amongst others:

**The Variable Approach**

Culture as something inherent in all aspects of the organisation:

**The Metaphor Approach**
The workers viewpoint
...Thank you