Sellafield Ltd

A Nuclear Management Partners company operated under contract to the NDA
Nuclear Safety

Presented by: Graham Young
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The purpose of this presentation is to answer the question: ‘why and how does Sellafield Ltd ensure nuclear safety at the Sellafield sites?’ and how do I fit in?
Since the Fukushima event, nuclear safety has become a topic around the world . . .

Why nuclear safety is important
- Radiation and all things nuclear have unique and threatening aspects
- The hazard can’t be detected by any of the human senses

. . .and citizens, government officials, and others want to know how nuclear sites ensure nuclear safety.

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Nuclear Safety – The Golden Thread

- For Operations, Nuclear Safety is about the Safe, Secure Site Stewardship (Management of nuclear materials)

- To enable this to happen, the plants need to be designed and constructed to enable optimum performance

- So for Projects, Nuclear Safety is about the design recognising the required operating parameters and then realising the design intent through the quality of workmanship

- Therefore, from concept to decommissioning, everyone has a part to play in Nuclear Safety
Sellafield nuclear safety starts with a clear definition of the work to be performed at the sites...

This scope of work is defined at multiple levels using multiple mechanisms...

**Corporate level**
- Parent Body Agreement between NDA, NMP, Sellafield Ltd

**Company / Site level**
- Work Breakdown Structures (WBSs)

**Project / Plant level**

**Worker level**
- R2A2s – roles, responsibilities, authorities, accountabilities

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Comprehensive efforts are taken to ensure that the scope of work is planned and performed in compliance with all government regulations.

The key government regulations concerning nuclear safety are the site license conditions issued by the HSE Office of Nuclear Regulations (ONR).
In addition, Sellafield Ltd strives for performance excellence (e.g., ‘beyond compliance’), so it also works to ensure that work is performed to international nuclear safety standards . . .

Sellafield Ltd is a member of both the World Association of Nuclear Operators (WANO) and the Institute of Nuclear Power operations (INPO) and follows the guidance of the International Atomic Energy Agency (IAEA)
At the core of Sellafield nuclear safety is the Sellafield Ltd *Nuclear Safety Policy*. This document establishes nuclear safety as Sellafield Ltd’s principal priority:

- Approved by the Sellafield Ltd Managing Director
- Sponsored by the Executive Director of Environment, Health, Safety & Quality (EHS&Q)
- Defines nuclear safety and underlying principles of nuclear safety

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Supporting the **Nuclear Safety Policy** is the Sellafield Ltd **Nuclear Safety Manual** . . .

- Amended 2013
- Describes Sellafield Ltd’s Nuclear Safety principles: and incorporates the INPO traits of a healthy nuclear safety culture (INPO 12-12)
- Describes how nuclear safety is currently managed within Sellafield Ltd in support of the **Nuclear Safety Policy**

**Helps employees and their organisations understand their roles (and the roles of others) in assuring nuclear safety**
How do I fit in?

- The implementation of Nuclear Safety includes five elements which apply to every one involved in the operations at Sellafield and supporting Sellafield.
How do you implement nuclear safety?

**Physical Controls**
- Physical items (walls, components, pipe work, brackets)

**Local Administrative Controls**
- Procedures, method statements, risk assessments

**Standards**
- Quality control, supervision, leadership, audits

**SQEP**
- Training and Personnel Development

**Culture**
- Values Principles and Traits

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**4 C’s (Criticality, Cooling, Containment and Control)**

**Contractors management system**

**Delivery of the Sellafield Ltd strategy**

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How do I fit in?

- Suppliers of components and equipment
- Support services
- Cleaners
- Construction companies
- Sub contractors
- The list is goes on
Physical controls

- Equipment performs to it’s requirement
- How do I fit in ?
- Nuclear safety = realising the design intent through the quality of workmanship
Local Administrative controls

- Follow the procedures, method statements, risk assessments whatever the instruction is
- Plan the work
- Ensure common understanding
Standards

• Sellafields contractors standards complied with via the contractors own management system

• Are they realistic?

• Are they being followed? How do you know?
• Are they being cascaded through your supply chain?
• Are you assuring that happens or hoping for the best?
SQEP (suitably Qualified and Experienced personnel)

- People are trained and competent to carry out their jobs, they understand their job, and they undertake it rigorously everyday
- Not just core skills but also understanding how their actions can influence nuclear safety
Culture

- Culture is defined as our values and behaviours and how our leaders reinforce them
Culture

- Personnel accountability
- Questioning attitude
- Effective communication
- Leadership values and actions
- Decision making
- Respectful work environment
- Continuous learning
- Problem identification and resolution
- Environment for raising concerns
- Work process
Nuclear Safety

- Nuclear safety is everyone’s accountability and responsibility
- Nuclear safety means different things to different people
- Difference can be making wrong and bad decisions
- Our culture affects our decisions
Intelligent customer - what is it?

• The ONR’s Technical Assessment Guide 49 states:
  “The licensee shall retain overall responsibility for, and control of, the nuclear and radiological safety and security of all its business, including work carried out on its behalf by contractors” and
  “The licensee should maintain an intelligent customer capability for all work carried out on its behalf by contractors that may impact upon nuclear safety.”

• The discharging of this responsibility is referred to as the Intelligent Customer function and, as can be seen, although undertaking the work can be delegated, the responsibility always stays with SL as the licensee – which is why SL must be involved with all tasks that have the potential to effect nuclear safety.
Intelligent customer – how do SL undertake it?

- By including in the PXP which parts of the work scope have nuclear safety related significance
- By ensuring contractor personnel involved in performing nuclear safety related work are qualified to do so and understand the nuclear related implications
- By maintaining oversight of contractor work that includes nuclear safety related aspects, including subcontracted work
- For further details see SLP 1.10.214.