Adding Value to Independent Safety Assessment: A Nuclear Industry Perspective

Andrew Buchan,
Co-Chairman,
Peer Review Forum
Background to Peer Review Forum

- Peer Review Forum was established in 2001 by BNFL, UKAEA and AWE to give a forum for ISA (Peer Review) within the Nuclear Industry.

Drivers for the Peer Review Forum

- Dissemination of Good practice
- Cost optimisation
- Avoidance of regulator ratcheting
- Mutual support of practitioners
- Learning from experience
Scope and Constraints

- Peer review – the independent review of nuclear safety cases
- Different licensees have different remits for their peer review process
- Discretion and experience needed in applying processes
- The group is sharing composite experience from peer review of many types of safety submissions
Topics Considered to Date

- Each new licensee representative explains their peer review process on joining the group
- Peer review issues related to near misses and events: Nuclear e.g. Davis Besse - Non Nuclear e.g. London Underground, Buncefield, NASA
- Peer review aspects of common documentation e.g.
  - Decommissioning
  - Site Wide Safety reports
  - Commissioning Documentation
  - Interactive Peer Review
Positive Outputs to date

- Resist NII challenge to be prescriptive on Peer review in SAPs
- Dissemination of Information
- Presentation to I Mech E seminar —Fit for Purpose Safety Cases in a Changing Nuclear Industry
- BNGSL being able to adopt a more interactive approach based on UKAEA and AWE experiences
- Benchmarking visits between licensees
- Increased confidence in approaches
Future Issues

• Peer review of submissions related to organisational changes – how should these be considered

• Peer review of Environmental Submissions

• Longer Term change of industry – types of skills needed, availability of resource to be able to support peer review. Balance of in-house/external resource

• Evaluation of Impact of revised NII Safety Assessment Principles
What have we learned thus far:
Safety Case Preparation - Health Check

- Lack of SQEP writers
- Late appointment of peer reviewer.
- Lack of overall resource.
- Lack of understanding of the process - There may not always be an intelligent customer.
- Lack of ownership of cases by Facility Management.
- Underestimation of time required by process.
- Inaccessibility to facility of Authors.
- "Fire fighting" interrupts planned process.
- Contractual problems.
- Change of author during the project.
- Lack of money.
- Unrealistic imposed milestones and external pressures on the project.
- Regulatory delays.
- Lack of interaction during the review.

- Poorly defined scope of safety case.
- Ill-defined specification of safety case.
- Incorrect categorisation.
- Lack of challenge to the process.
- Poor records (e.g. drawings) availability.
- Problems arising during assessments (e.g. inventory changes).
- Engineering substantiation of old facilities.

- These issues will not be confined to nuclear safety cases and there are useful lessons here across industry sectors
Conclusions

• The Peer Review Forum has proved a useful vehicle for improvement and sharing of best practice
• Processes have improved as a result
• The results of collective experience can be very useful in increasing confidence
• Peer review forum looks forward to working with SCSC/ISA as a specific sector group.