Operator Licensing and Staffing

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Overview

- Questionnaire
- Staffing
- Operator qualification

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Questionnaire

- Used to obtain information from geographically diverse regulators on preparations for advanced reactors on staffing and operator qualification
- Six responses received
- Responses are summarized

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Staffing - Minimum

- Answers varied from no specified minimum up to a total of 4
- Typically, at least one licensed/qualified operator is required to be present at all times
- Typically, qualification can vary
  - Example – board operator and senior operator

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Staffing - Flexibilities

- Some countries had flexibility in the minimum staffing based on the plant status (shutdown versus operating)
- Some countries do not have flexibility on minimum staffing
- One country allows for minimum staffing based on other factors

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Staffing – Use of simulators

- Typically, the responsibility for ensuring sufficient staffing is left to the facility licensees, provided that minimum staffing is met
- Simulator data collected by the facility may be reviewed by the regulator as part of the license review activities
- One country does use simulators to assess staffing levels

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Staffing – Facility proposed

- Responses vary
- In some countries, the facility can propose different staffing levels, so long as the minimum requirements met
- In some countries, an exemption or amendment is required to change staffing levels
- In all countries, the staffing is documented, and some form of regulatory review performed

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Staffing – HFE used

- Responses vary
- In some countries, human factors engineering analysis is not required
- In some countries, human factors engineering analysis is required

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Operator Qualification

- Training Programs
  - Some countries approve training programs and some review programs
  - Some countries have regulations, some use industry standards
- Qualification/Licensing
  - All countries have at least one position that must meet specified requirements
  - Most countries require at least one position be certified/licensed by the regulator

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Operator Qualification

- Autonomous/Remote Operations
  - None of the countries have allowances for autonomous operations
- Qualification flexibilities
  - Most countries had flexibilities for trainees
  - One country had limited flexibility
  - One country had flexibility

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Country Specific Examples

- Goal-oriented regulatory framework
  - General objectives for safety operations at nuclear facility (includes but not limited to power reactors)
  - Licensee defines and justifies requirements for staffing, training and qualification
    - Regulator assesses requirements (and any modification) and inspects

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Country Specific Examples

- Fully autonomous operations precluded
- May be remotely operated
  - Some staff must remain on-site for emergency response

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Questions?