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RADTRAD Panel Discussion

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RADTRAD Panel Discussion

- Welcome!
- Introductions
- Topics for discussion
  - Use of RADTRAD
  - Information sources
  - Transition from RADTRAD 3.03 to SNAP/RADTRAD
  - Questions about using the RADTRAD code
- Other questions?

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Panel members

- Michelle Hart

  Office of New Reactors, US NRC
- Mark Blumberg

  Office of Nuclear Reactor Regulation, US NRC
- John Tomon

  Office of Nuclear Regulatory Research, US NRC
- Bill Arcieri and Diane Mlynarczyk

  ISL, Inc.

  Contractor to US NRC for RADTRAD code development

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Use of RADTRAD

- US NRC staff use SNAP/RADTRAD for power reactor licensing
  - Confirmatory analyses of the radiological consequences of design basis accidents (DBAs)
    - Operating reactor license amendment requests
    - New reactor design certification, combined license (COL) and early site permit (ESP) reviews, including siting assessment for COLs and ESPs
- Licensees and applicants do not have to use RADTRAD
  - Many have used RADTRAD 3.03
  - Others may use similar or derivative codes

Questions and comments

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Information sources

- Licensees and applicants describe their analyses in the Final Safety Analysis Report (FSAR) or Design Certification Document (DCD)
- Guidance on methods and assumptions that are acceptable to the US NRC
  - RG 1.195, RG 1.183, Other RGs on DBA radiological consequences
  - NUREG-0800 Standard Review Plan Chapter 15
- Staff develop independent confirmatory analyses to evaluate the FSAR or DCD information
  - Sensitivity or scoping analyses to evaluate methods or assumptions that differ from guidance

Questions and comments

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Transition from RADTRAD 3.03 to SNAP/RADTRAD

- US NRC staff previously used RADTRAD 3.03 but has recently transitioned to SNAP/RADTRAD
  - Lots of experience with RADTRAD 3.03 and its particular quirks
  - Getting comfortable with look and functionality of SNAP/RADTRAD
  - Keeping SNAP and the RADTRAD module up to date
  - Importing RADTRAD 3.03 analyses into SNAP/RADTRAD

Questions and comments

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Questions about using the RADTRAD code

- RADTRAD continuous improvement program to address user feedback
- Modeling of non-LOCA accidents and reactor coolant activity
- Multiple sources
- Control room modeling, multiple atmospheric dispersion factors
- Use of SNAP features and plotting of results
- Problem sets for code testing
  - Input from users on additional problems welcome

Questions and comments

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Other Questions?