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Socialization of Risk Technology



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Risk Technology – The Tool

- As with any tool, risk technology
 - Has specific uses
 - Can be misapplied or misused
- Risk technology is best used to identify gaps in the traditional safety analysis approaches. Where traditional safety analysis approaches:
 - Don't address all aspects
 - Are not tenable
 - Where burden not commensurate with benefit

Risk Technology – Status

- Risk technology is “newer” than safety analysis
 - Some areas mature
 - Other areas are still evolving
 - Not widely understood
- Safety analysis is mature and socialized
- Socialization of risk technology is desirable to foster appropriate application
 - Use of risk-informed versus risk based
 - Use where risk results are fully understood
 - Use of appropriate tool, e.g., detail and conservatism

Risk Technology and Conservatism

- Compound conservatism is a misapplication of risk technology that can lead to erroneous conclusions
- Conservative: results of the cases are comparable
- Realistic: results differ by a factor of 2
- Assumptions and other factors more significantly impact conservatism

| Conservative | Realistic |
|---------------------------|-----------------------------------|
| Case 1 | |
| A = 1.9 ~ 2 | A = 1.9 |
| B = 1.9 ~ 2 | B = 1.9 |
| C = 5.8 ~ 6 | C = 5.8 |
| A*B*C = | A*B*C = |
| $2 * 2 * 6 = \mathbf{24}$ | $1.9 * 1.9 * 5.8 = \mathbf{20.9}$ |
| Case 2 | |
| A = 1.6 ~ 2 | A = 1.6 |
| B = 1.3 ~ 2 | B = 1.3 |
| C = 5.3 ~ 6 | C = 5.3 |
| A*B*C = | A*B*C = |
| $2 * 2 * 6 = \mathbf{24}$ | $1.6 * 1.3 * 5.3 = \mathbf{11.0}$ |

Risk Technology and Conservatism

- Realism is both the power of risk technology and its greatest challenge
- One of EPRI's roles is to help address gaps in the state of knowledge to allow undue conservatisms to be eliminated
- Another one of EPRI's roles is to foster the understanding of the benefit gained from risk-informed approaches, i.e., socialization

Risk Technology Socialization

- Concept is to provide training that begins the process to “socialize” risk technology
- Computer Based Training (CBT)
 - Portable and accessible
 - Tailored to needs
 - User discretion
 - Time
 - Pace
 - Depth

