



# Technology Inclusive Content of Application Project (TICAP) Public Meeting

November 9, 2021  
Microsoft Teams Meeting  
Bridgeline: 301-576-2978  
Conference ID: 292 316 880#

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# Agenda

Time	Topic	Speaker
1:00 – 1:10 pm	Opening Remarks	NRC/Industry
1:10 – 1:40 pm	Overview of Response to NRC Comments Discussed during Public Meeting on October 5, 2021	Industry
1:40 – 2:30 pm	NRC Staff Overview of Updates to TICAP Guidance	NRC
2:30 – 2:45 pm	Stakeholder Questions	All
2:45 – 3:00 pm	Break (if needed)	All
3:00 – 3:40 pm	Continuation of Discussion	NRC/Industry
3:40 – 3:50 pm	Stakeholder Questions	All
3:50 – 4:00 pm	Next Steps and Closing Remarks	NRC/Industry

**\*Note that Industry's TICAP guidance document is available at:**

**<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML21250A378>**

# TICAP Public Meeting

- Purpose: to discuss draft guidance for advanced reactor application safety analysis reports (SARs) using Nuclear Energy Institute (NEI) 18-04's Licensing Modernization Project (LMP)
- Key documents:
  - NEI 21-07, Revision 0, "Technology Inclusive Guidance for Non-Light Water Reactors Safety Analysis Report Content for Applicants Using the NEI 18-04 Methodology" ([ML21250A378](#))
  - NRC draft exceptions, clarifications, and additions ([ML21274A032](#))
  - NRC comments on NEI 21-07 ([ML21274A031](#))
  - Additional background available on the NRC Advanced Reactor Content of Application Project (ARCAP)/TICAP public webpage (see: <https://www.nrc.gov/reactors/new-reactors/advanced/details.html#advRxContentAppProj>)

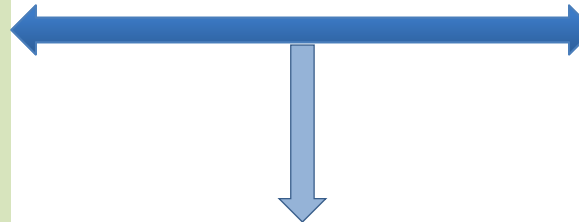
# ARCAP and Technology Inclusive Content of Application Project (TICAP) - Nexus

## **Outline Safety Analysis Report (SAR) – Based on TICAP Guidance**

1. General Plant Information, Site Description, and Overview of the Safety Case
2. Methodologies and Analyses
3. Licensing Basis Event (LBE) Analysis
4. Integrated Evaluations
5. Safety Functions, Design Criteria, and SSC Safety Classification
6. Safety Related SSC Criteria and Capabilities
7. Non-safety related with special treatment SSC Criteria and Capabilities
8. Plant Programs

## **Additional SAR Content –Outside the Scope of TICAP**

9. Control of Routine Plant Radioactive Effluents, Plant Contamination, and Solid Waste
10. Control of Occupational Doses
11. Organization and Human-System Considerations
12. Post-construction Inspection, Testing and Analysis Programs



## **Audit/inspection of Applicant Records**

- Calculations
- Analyses
- P&IDs
- System Descriptions
- Design Drawings
- Design Specs
- Procurement Specs
- Probabilistic Risk Assessment

## **Additional Portions of Application**

- Technical Specifications
- Technical Requirements Manual
- Quality Assurance Plan (design)
- Fire Protection Program (design)
- Quality Assurance Plan (construction and operations)
- Emergency Plan
- Physical Security Plan
- SNM physical protection program
- SNM material control and accounting plan
- Cyber Security Plan
- Fire Protection Program (operational)
- Radiation Protection Program
- Offsite Dose Calculation Manual
- Inservice inspection/Inservice testing (ISI/IST) Program
- Environmental Report
- Site Redress Plan
- Exemptions, Departures, and Variances
- Facility Safety Program (under consideration for Part 53 applications)

- Safety Analysis Report (SAR) structure based on clean sheet approach

\*Additional contents of application outside of SAR are still under discussion. The above list is draft and for illustration purposes only.

# NRC Update to TICAP Guidance

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- NRC draft exceptions, clarifications, and additions ([ML21274A032](#))
  - Discussed during October 5, 2021, Public Meeting
- Staff updating July 8, 2021, draft TICAP Regulatory Guide white paper ([ML21190A014](#)) to include the following:
  - Exceptions, clarifications, and additions discussed during October 5, 2021, public meeting
    - Interpretation of principal design criteria (PDC) requirements and proposed guidance not included and will be updated when staff position has been developed
    - Staff removing addition related to applicability of Tables 5-1 and 5-2 to Non-Safety-Related with Special Treatment (NSRST) structures, systems, and components (SSCs).
      - Based on reconsideration from information provided during October 5, 2021, public meeting, staff determined that this does not apply to the NSRST SSC classification process

# NRC Update to TICAP Guidance

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- Staff updating July 8, 2021, draft TICAP Regulatory Guide white paper ([ML21190A014](#)) to include the following (continued):
  - Exceptions, clarifications, and additions discussed during October 5, 2021, public meeting (continued):
    - Staff considering changes to discussion Appendix B, “Example Licensing Basis Event Descriptions,” beyond stating that it does not endorse it.
      - Considering expanding discussion, with appropriate caveats, that Appendix B provides useful examples on how to apply the guidance in specific areas
      - Staff notes that in the absence of an NRC-approved SAR with associated references, a conclusion on completeness is predecisional

# NRC Update to TICAP Guidance

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- Staff updating July 8, 2021, draft TICAP Regulatory Guide white paper ([ML21190A014](#)) to include the following (continued):
  - Updating draft TICAP Regulatory Guide white paper Appendix A, “Construction Permit Application Guidance,” based on NEI 21-07, Revision 0 and to note inconsistencies, for example:
    - Detailed list addressing site information required to be in the construction permit (CP) application
    - Scope of the probabilistic risk assessment (PRA) information broader and more detailed
    - Preliminary analysis to support §§ 50.34(a)(4) & 50.43(e)(1)(iii) reasonable assurance finding addressed in Section 2.c of Appendix A
    - PDC discussion and complimentary design criteria (CDC) discussion will be updated
    - Information to support determinations that each Safety-Related (SR) or NSRST SSC will meet reliability and performance specifications credited in the PRA discussed in Sections 6 and 7 of Appendix A
- Outside of TICAP guidance, NRC is considering adding guidance on how to select the source term to be used for the siting determination to the ISG for Chapter 2 "Site Information"

## Next Steps – Future Milestones

<b>TICAP Near-Term Milestones</b>	<b>Target Date</b>
<b>Update of NRC Draft Guidance Documents</b>	November 2021
<b>ACRS Future Plant Designs Subcommittee Meeting on ARCAP/TICAP Guidance Documents</b>	December 15, 2021
<b>Continuation of Discussion of NRC draft Exceptions, Clarifications, and Additions (possibility of future draft industry or staff documents)</b>	TBD
<b>NEI 21-07, Revision 1</b>	TBD
<b>Issuance of TICAP draft RG and ARCAP interim staff guidance for public comment</b>	Early Calendar Year 2022