



D.C. Cook Unit 1 and Unit 2
Final Supplemental Response to NRC Generic
Letter 2004-02

GL 2004-02 Final Response Pre-submittal Call
January 11, 2022



Meeting Purpose and Agenda

- **Meeting Agenda**
 - Discuss the CNP Unit 1 and 2 Final Response to GL 2004-02
 - Discuss CNP evaluation specifics that are potential sources of RAIs
- **Meeting Goal**
 - Identify NRC expectations for the CNP GL 2004-02 submittal to prevent RAIs and delay closure of the generic letter



CNP GL 2004-02

Submittal

- I&M Plans to submit the final supplemental response to GL 2004-02 on January 20, 2022
- The CNP Unit 1 and 2 response follows the industry template created in PWROG-16073-P
- I&M is using closure option 2 – deterministic evaluation with methods outlined in WCAP-17788
- I&M has open commitments to submit a final response and to address the effects of Temp-Mat material
 - The I&M submittal closes all open commitments
- I&M has previously addressed all items except the in-vessel effects



CNP Evaluation

- I&M completed strainer bypass testing for the installed CCI strainers. Results of this test were submitted in 2010 (ML101540527). The results of the bypass test are not used in the current evaluation due to questions in the test method.
- The CNP evaluation uses the clean plant criteria to calculate debris load
 - Bypass Fraction - 45%
 - Transport Fraction - 75%
- If no alternate flow path (AFP) credit is taken, fiber at the core inlet (95 g/FA) exceeds the WCAP-17788 core inlet limit
- NRC staff review guidance states that licensees may justify sufficient long-term core cooling for debris loads that exceed the core inlet limit based on the formation of a non-uniform debris bed at the reactor core inlet. Non-uniform debris loading is credited in the CNP evaluation.



CNP Evaluation

- **WCAP-17788 was issued with CNP configured as a down flow plant**
 - **CNP performed an up-flow modification**
 - **A plant specific calculation for AFP resistance was performed for the current CNP configuration.**
- **All other critical parameters are bounded**



Summary

- I&M is using the clean plant criteria
- The calculated debris loading for CNP Units 1 and 2 is 95 g/FA
- The evaluation credits non-uniform debris deposition at the core inlet
- A plant specific AFP resistance has been calculated which is similar to other similar up-flow plants documented in WCAP-17788
- All other critical parameters are bounded by the WCAP-17788 methodology