

DCPP Unit 1 Capsule B Testing and Analysis

Results Briefing to DCISC

June 30, 2026



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Summary

- Westinghouse performed extensive testing on Surveillance Capsule B per NRC requirements and guidance
- Results further confirm Unit 1 continues to meet Federal reactor vessel integrity requirements and remains safe for at least 60 years of operation
- Results support NRC's previous June 2025 License Renewal Safety Evaluation Report conclusions and the existing reactor vessel integrity analysis of record
- Results documented in non-proprietary report WCAP-19173-NP and will be submitted to NRC on June 29, 2026

Comparison to WCAP-18924-NP

- **WCAP-18924** is the reactor vessel integrity analysis of record
 - Cited in NRC's License Renewal Safety Evaluation Report
 - Previously evaluated by DCISC
 - Referred to as the “previous analysis” in these slides
- Previous analysis **conclusions remain valid** when considering Capsule B results:
 - No change in credibility conclusions (i.e., results follow expected trends)
 - Neutron fluence projections roughly equate to those in previous analysis
 - RT_{PTS} inputs are bounding or equal to previous analysis (e.g., increase in the average Charpy V-notch 30 ft-lb temperature [ΔRT_{NDT}], margin term [M], unirradiated RT_{NDT} , etc.)
 - Upper Shelf Energy (USE) inputs are bounding or equal to previous analysis (e.g., copper content, 1/4T fluence at 54 EFPY, unirradiated USE)

Credibility Evaluation

- Evaluated per the five criteria from Regulatory Guide (RG) 1.99, Rev 2: **no change to conclusions since previous analysis**
 - Credible for weld heat # 27204/flux Linde 1092 (used in the Intermediate & Lower Shell Longitudinal Welds 2/3-442A, B, C)
 - Includes use of Palisades “sister plant” data (same heat #/flux)

Neutron Fluence

- **Capsule B exposure equivalent:** $3.62 \text{ E}19 \text{ n/cm}^2$
 - ✓ Within 1-2 times (~1.7 times) the peak vessel fluence expected at 60 years (range $2.14 - 4.28 \text{ E}19 \text{ n/cm}^2$), per NUREG-1801, Rev. 2, XI.M31
- **Projection Methodology:** satisfies the requirements set forth in RG 1.190, Rev 0
 - ✓ Approved by the NRC; described in WCAP-18124-NP-A and WCAP-18124-NP-A, Rev 0, Supplement 1-NP-A
- **Limiting Fast Neutron Fluence Beltline Results at 54 EFPY (60 years):**
same limiting locations as previous analysis



Key Takeaways

- Report (WCAP-19173-NP) satisfies NRC surveillance capsule withdrawal and testing requirements
- Comprehensive report shared with DCISC for review
- Surveillance capsule withdrawal and testing actions are satisfied for license renewal
- Ongoing dosimetry monitoring and periodic reactor vessel inspections continue through the 20-year renewed license period
- Both Units 1 and 2 are safe for at least 60 years of operations