

Commonwealth Edison Company  
Braidwood Generating Station  
Route #1, Box 84  
Braceville, IL 60407-9619  
Tel 815-458-2801



September 29, 2000  
BW000098

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555 - 0001

Braidwood Station, Units 1 and 2  
Facility Operating License Nos. NPF-72 and NPF-77  
NRC Docket Nos. STN 50-456 and STN 50-457

**Subject:** Reactor Vessel Material Surveillance Assessment

- Reference:**
- (1) Letter from T. J. Tulon (ComEd) to U.S. NRC, "Reactor Vessel Material Surveillance Capsule W Test Results and Information Related to Assessments of Reactor Vessel Materials Data," dated April 26, 2000.
  - (2) Letter from R. M. Krich (ComEd) to U.S. NRC, "Request for License Amendment to Permit Up-rated Power Operations at Byron and Braidwood Stations."

In Reference 1 Braidwood Station proposed to submit a follow-up assessment of the test results for the Reactor Vessel Radiation Surveillance data of Unit 1 capsule W and Unit 2 capsule W in September 2000. Commonwealth Edison has completed this assessment and has determined that, while the current Braidwood Station Heat up and Cooldown Limitation curves remain valid for current operation, the capsule analysis results indicate that the curves need to be updated for future operation.

Based on the capsule analysis results, new Braidwood Station Heat up and Cooldown curves have been generated using neutron fluence projections at an anticipated up-rated core power of 3586.6 Megawatt-thermal. In addition, the methodologies allowed by ASME Code Case N-640, "Alternative Reference Fracture Toughness for Development of P-T Limit Curves for Section XI, Division 1"; ASME Code Case N-580, "Attenuation to Reference Flaw Orientation of Appendix G for Circumferential Welds in Reactor Vessels Section XI, Division 1"; and WCAP 15315, "Reactor Closure Head/Vessel flange Requirements Evaluation for Operating PWR and BWR Plants," were utilized in developing the heat-up and cooldown curves. Approval of these methodologies is anticipated concurrent with approval of the Byron Station and Braidwood Station power uprate license amendment request submitted to the NRC in Reference 2.

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Upon approval of the methodologies supported by Code Case N-640, Code Case N-588, and WCAP 15315, we will revise and implement the new revision of the PTLR and provide a copy of the revised PTLR to the NRC in accordance with the reporting requirements of Braidwood Technical Specifications 5.6.6.c, "Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR)" and Appendix H to 10CFR 50, "Reactor Vessel Material Surveillance Program Requirements."

Please direct any questions you may have regarding this submittal to Mr. Terry Simpkin, Regulatory Assurance Manager, at (815) 458-2801, x2980.

Sincerely,

A handwritten signature in black ink, appearing to read "T. J. Tulon for". The signature is written in a cursive style with a large, looping flourish at the end.

Timothy J. Tulon  
Site Vice President  
Braidwood Station

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Braidwood Station